

mahi nadi par gujrat me  
is nadi par gujrat me  
bajaj sagar project hai  
K pugia  
chq  
has

Pravalli mountain area me raus  
district atra h jo famous  
marbles ke liye jahaan  
Makrana namak rhaan  
hai jo marble ke liye  
jana pata hai. Cimp

Eastern Gahatkhand plateau  
divide kota hai son nadi

System of Mahanadi system ko

Central highland ko

eastern part me 3 alay

plateau hai CNP plateau

Ranchi plateau

hazaribagh plateau

14 Nov 25

South India one casteism & discrimination  
led by ~~khilaaf~~ EV Ramaswamy Naikar  
1925 me self respect movement  
Chalayeniko year se Periyar bolte  
the

Western Ghats in MH are  
known as Sahyadri meaning  
human to help koy wala  
mountain main peak Kalsubai.

Chet

## Rechnung

P

*[Signature]*

Bari

list.

B

S

deflect / reflect org disc

## Communications

Communications

- 800 to 600 m from each surf

15 Nov 25

## Indus drainage system

Tibet mansarovar area 3 main rivers nikal h jiska flow area India ko affect kota h.

① Indus

② Sutlej

③ Jangpo

## Indus

Indus water system ki major rivers h jo Tibet, <sup>se</sup> Kikalne ke baad Ladakh ke northern part se jiske me sates hoti h.

ye river Jh me  
flow kote hve  
pake chali jaati h. is  
river par India pake ke  
baech Indus water treaty h.

"(1960 me)  
hui

/ jiske antargat India ke dwara  
is system ka 20% pani use  
kiya ja skta h.

Note delhi ridge Indus  
drainage system 8

janga drainage system ko divide  
karta h

Ise side par haryana me  
ambala city h jahan par hone  
wali rain se dono system  
ko paani milta hai.

Other rivers of Indus system

Jhelum river

- Origin JK ke anantnag district  
ke resevoir lake se hota hai
- ye nadi wo les lake banati h  
jo india me freshwater  
biggest lake hai.

• Is nadi ke leinaare sringar

basa<sup>hug</sup> hai Thevum ke

• Thevum nadi ke pani

jab dehte dehte jam jata hai

tab Us area me ek

special soil formation Lottah

jise Karwai bolte h

Thevum:: karappa::

ye mitti se son chiron ke

lye <sup>may best</sup> supportive hai.

Indus : tributaries : Chenab

- Chenab :: HP ke Baralacha la pass se chandravansh bhabha namake do rivers mil ke chenab banati hai
- Chenab :: poore indus system ki most imp river h chenab.
- Rohtang pass ke north se saris south se beas river nikli h.
- Ravi : himachal me chamba valley bandi

Ravi::

• Ravi pak me chenab se milte h.

Sutlej::

Tibet mansarovar area se

nikalne k baad sutlej HP

ke Ship kila pass se

India me entea kati

Sutlej::

HP me behto ye river punjab

jatis

Sutlej::

Jo river pe bakhra  
nayal dam bana h

• Sutlej:: enters from shipkilla,  
ispr himachal  
punjab border area  
me bhakhra nayal project

• Sutlej:: in himachal me <sup>naffha</sup> <sup>Naoptha</sup>  
jhakhdia  
project (puchas)

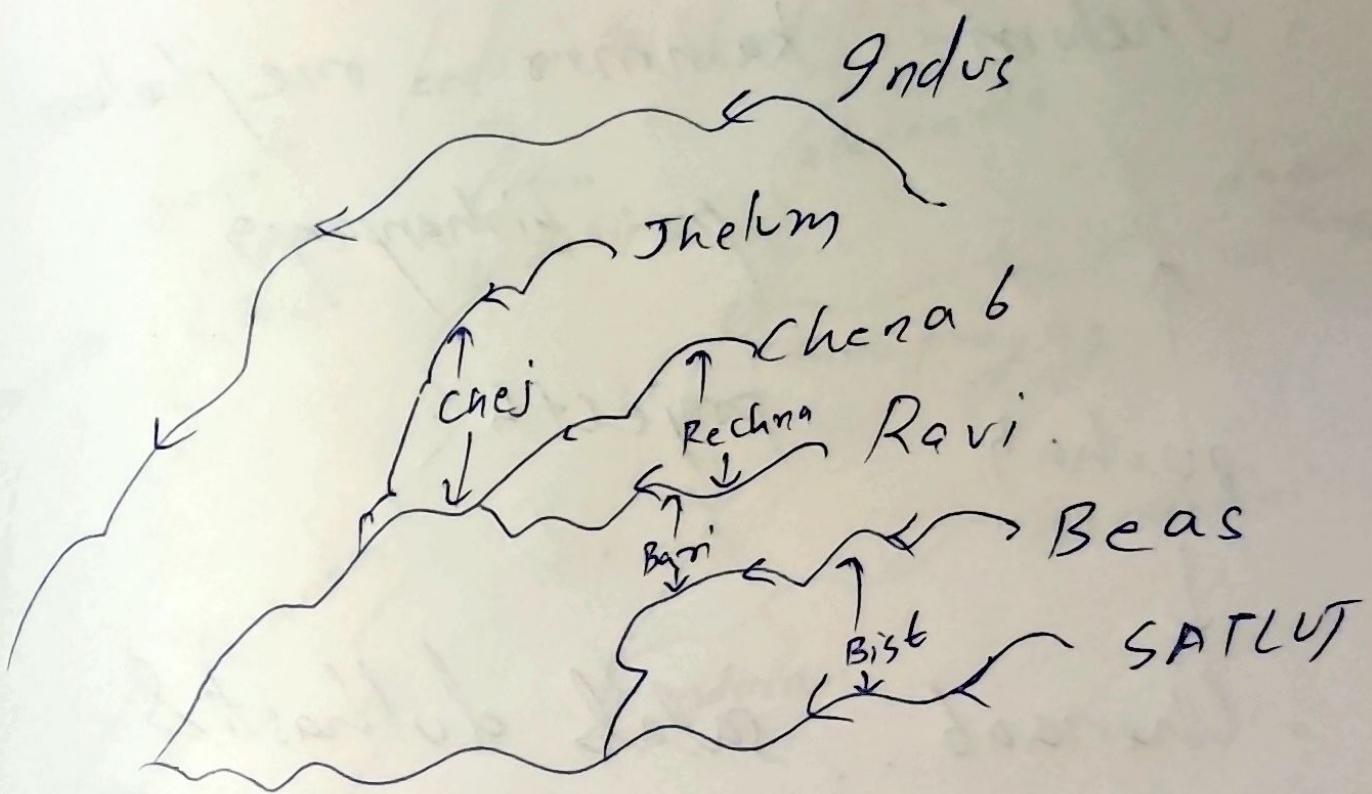
• Sutlej:: Bhakhra nayal dam ke  
reservoir ko going sagar  
project go Heh jo punjab meh

• Sutlej:: punjab me hi beas  
river Sutlej se milti h

hasi ke namak place par  
yahan hasi ke namak  
wetland bhi h.

• Buttej jahri se indira gandi  
canal banyi gayi h  
jo Raj ke dry area  
ke aye ko support keta h

• Buttej j, prakar bhakloa  
nayal project se himachal  
Punjab haryanwa  
& Raj ke benefit hote h



— Je  
 Chej      Ch  
 — Rechna      Ravi / Re

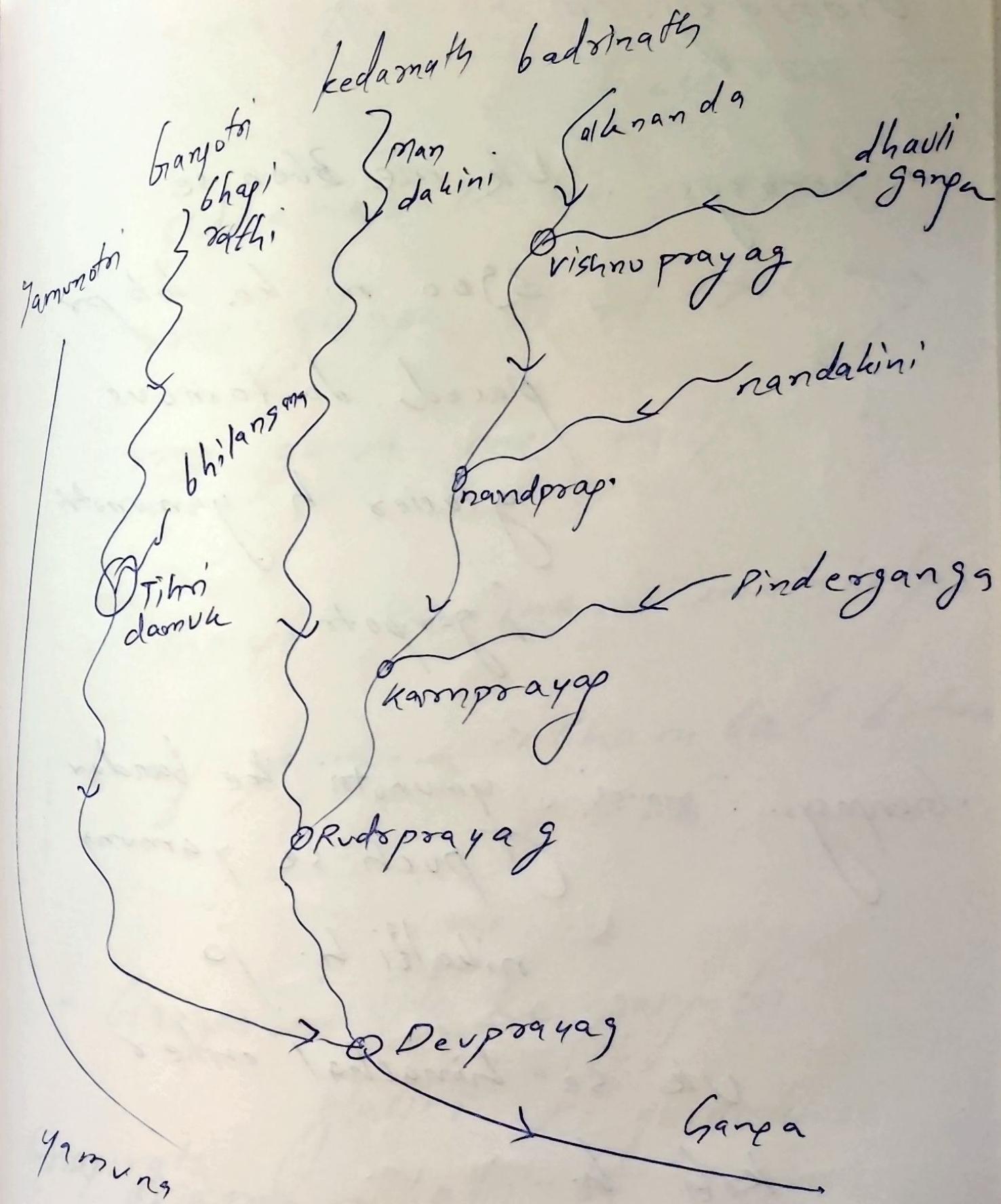
— Bari  
 — Bea  
 — Bist      St

• Sholom : kashmir one sholom

↑  
pucharh projects  
↓

• Chenab : salab dulhastis  
baglihar project Chenab  
pre.

• Sutlej : Nafthakri, bhabranyal  
Himachal



## Ganga system

• hanasys - : uk me 3600 se  
3900 m ke ht pr  
placed do famous  
glaciers h yamunotri  
& gangotri

• Ganga sys - : yamuni : yamunotri ke bandar  
J puch se yamuna  
nikalti h . jo  
uk se himachal enter  
koti h.

Ganga Yamuna : delhi aps  
note we

Allahabad go प्रयाग  
me ganga is its tributary  
me ganga me मिलती है.

Ganga Yamuna : main helps

Yamuna → Chambal between  
Kes

Ganga : UK ke gangotri  
glaciers ke gomukh se  
Champashi निकलती है.  
Champashi को हर Ganga marches

पर्ये नाम देवप्रयग  
के बदमिश

• Ganga : भृगीथि : देवप्रयग

के भृगीथि के बहारों

के नेटवर्क ही जो इनका

भृगीथि : भृगीथि से भिलांग

जिसके तिरी मे

मिथि ही ही फारूस

फिरी दम बरा ह.

Bhagirathi : Devo prayay me  
bhagirathi Lalagnanda  
miltch aur gahan se  
ganga ke apne naa milt  
h ganga

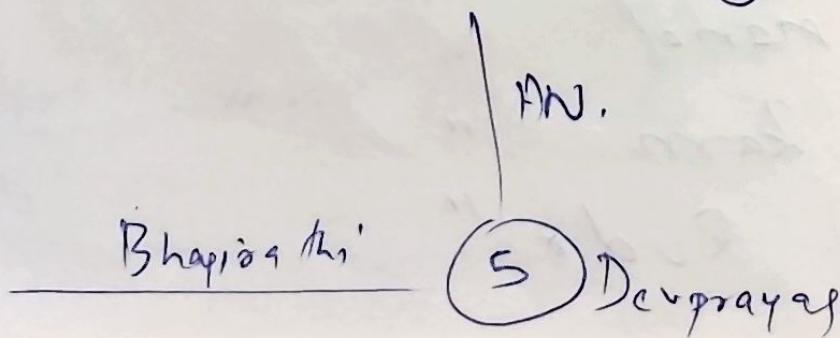
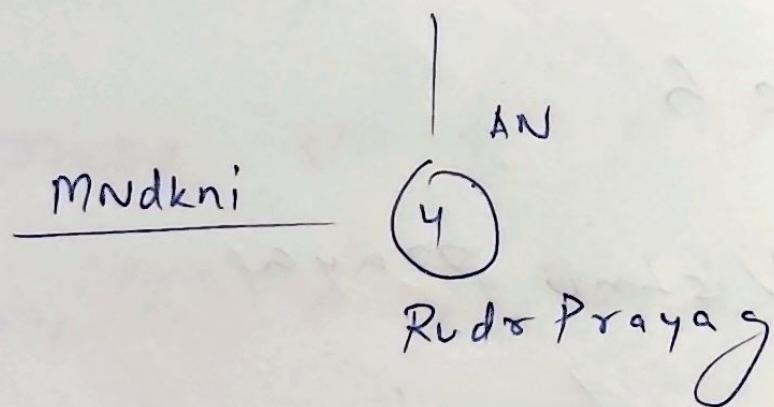
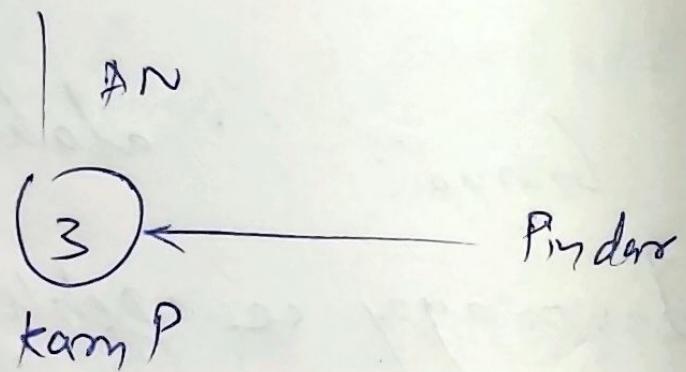
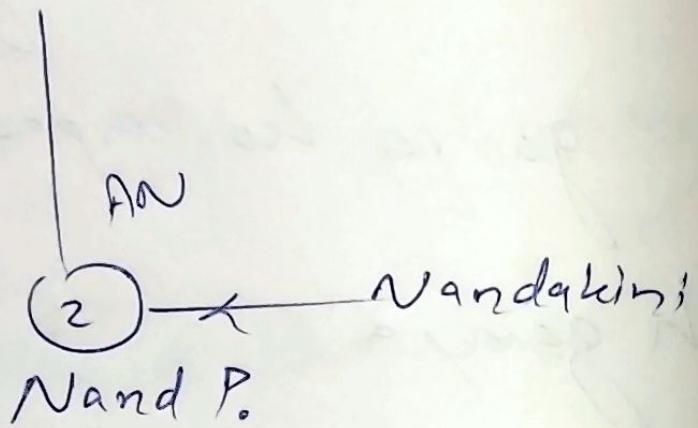
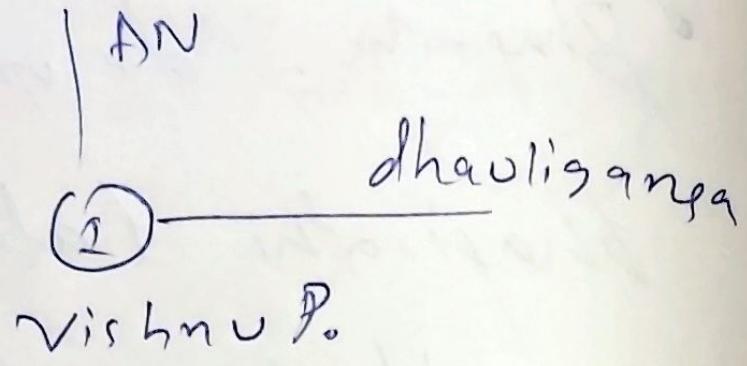
Ganges : alakhnanda : nadip  
devo prayay se pehle & anya prayay  
6hi hote h

① Vishnu prayay

② nand " "

③ karn " "

④ Rudra "



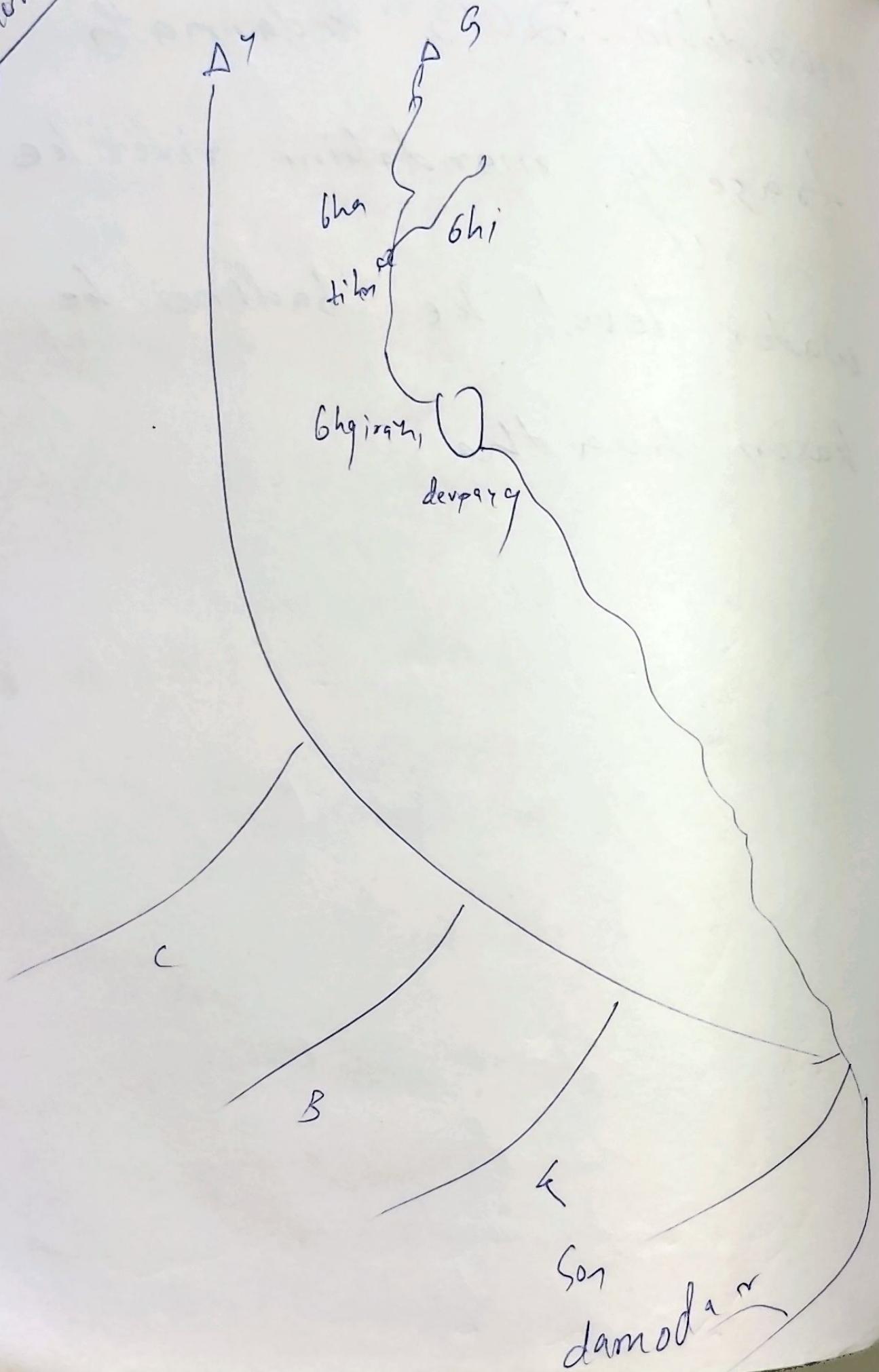
Mandakini:-2013 Kedarnath

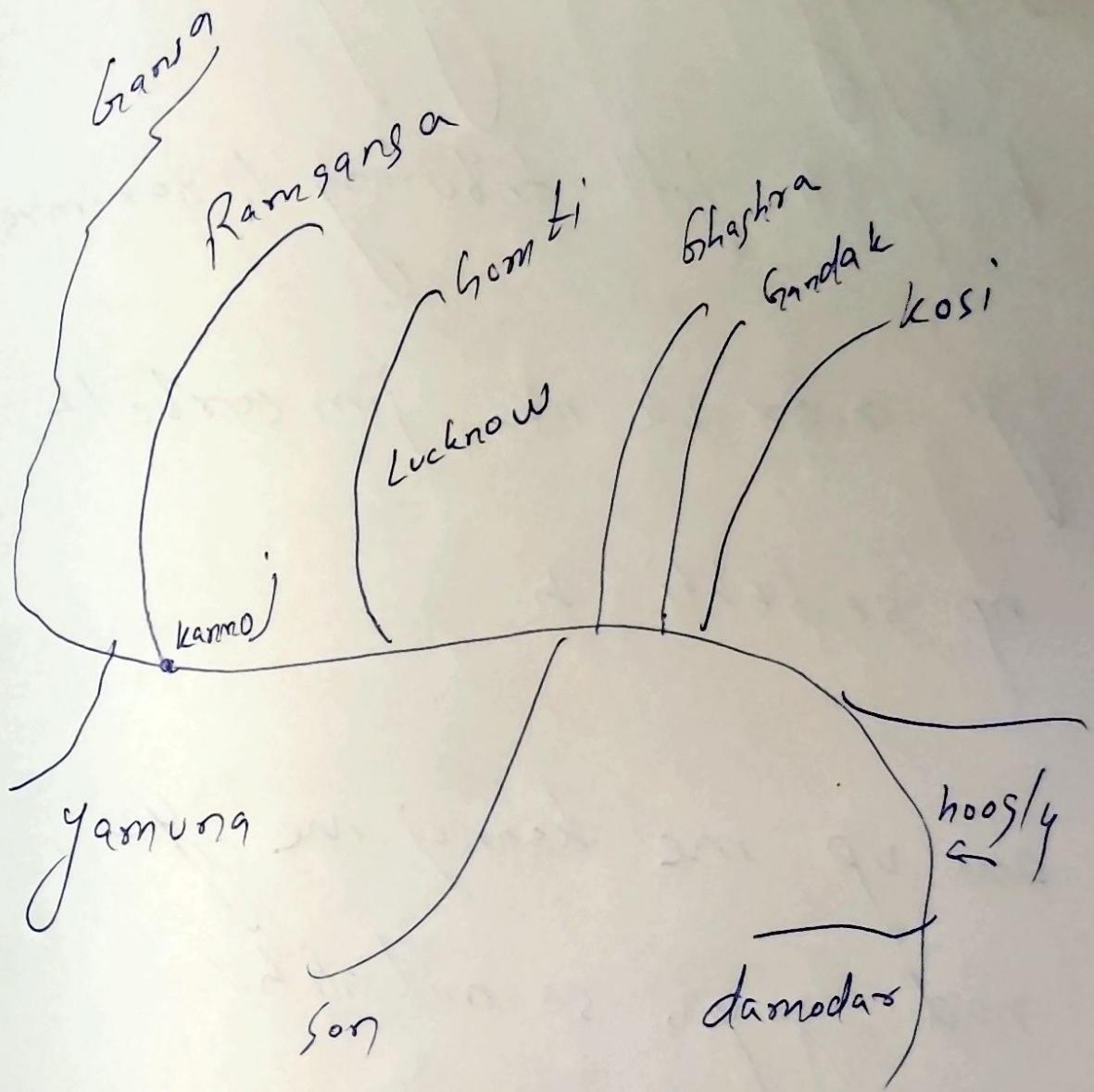
frasedy mandakini river ke

water level ke badne ke

karan hua tha

Ignore





gan  
Ram gom - ~~ha~~ han ko

Ganga::  
Deyprayag k bad ganga river  
ki pehli left tributary h Dampay  
ye river uk me Jim Corbett  
np se lehti h.

- aur UP me Kannoj me ye  
nadi Ganga se mil jati h
- doosri left tributary Yamuna  
yamuna ke kinge Lucknow h.
- Nepal ko water tower of  
Ganga bolte h.

jahnase Ghaghra Gandak

& kosi rivers nihal hr

ganga ai left tributary both h.

• gandak river ho vedon

me sadaneera bolte h

is river me shaligrams

pathas mith.

• kosi river bihar ke

bhagalpur k pas ganges

mith h kosi ho sown of

bihar bolte h.

• Ganges aur baad jhe

WB ke borders par

ganga ek form leke

split ho jati h

• ek branch jo bangladesh  
chali jati h use bangladesh

me padma bolte h

• jiki india wali branch  
ko roughly bolte h.

jiske kinare caliuth

basa hua h.

- Ganga ki st tributaries Yamuna, son, & Damodar h
- Son river ganya se Bihar ki cap patna me milti h.
- Jharkhand plateau ki main river h Damodar jo Hooghly ki st tributary h

iss nachi pr India ke  
pehla multipurpose project

bana DVC 1948.

17 Nov 25

Dhaan & jute crop ke lie ek jaisi

Siton <sup>conditions</sup> needed h :

1 Rainfall 125 to 150 cm

2 Temp  $25^{\circ}\text{C}$  & humid condn

3 Cheap labour

West Bengal dono kahi main producer  
h

Wheat & Jute.

following gases k dvara green house

effect hotah:

CO<sub>2</sub>

NO<sub>x</sub>

Ozone

CH<sub>4</sub>

CFC

Hydrogen ko oxygen ke presence me  
burn krne pr CO<sub>2</sub> nai nikalati.

Charkhamba/ hardeo/ trishool/ kamet

peaks are in kumao & gashwa/ him.

Kacch ka rann is the best example of  
repeated fall in sea level  
giving rise to present day extensive  
marshlands

Note: Orissa bhitarikanika NP ek  
mangrove vegetation h jo bishnani &  
baitani rivers ke delta ke beech h  
ye ek mangrove vegetation h jo  
bade size ke salt water crocodiles  
k liye jana pata h.

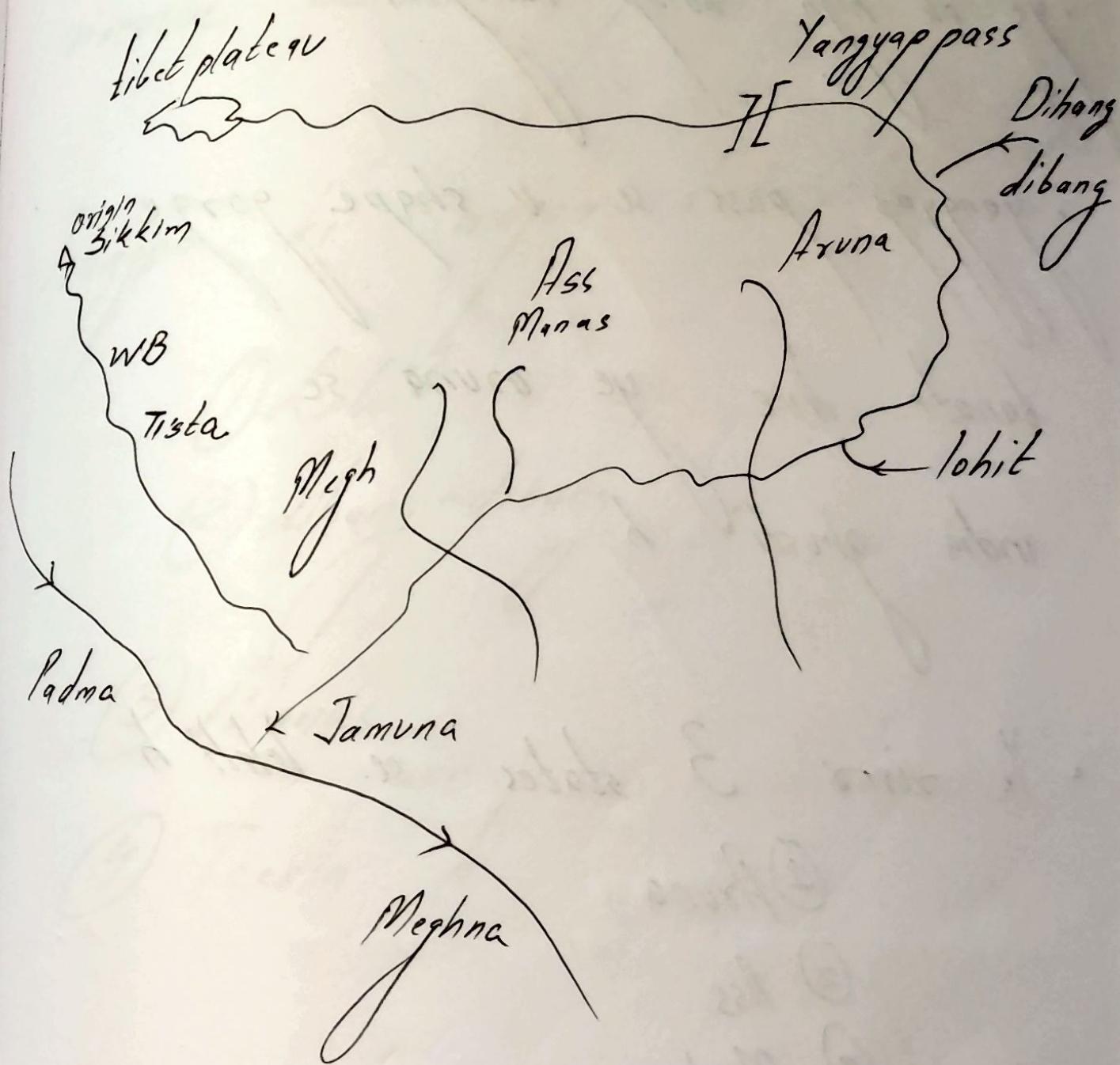
Ilmenite & rutile abundantly available in costal parts of india are rich sources of titanium

Coal based power plants  $\text{SO}_2$  ke emission ko ek sada source hai.

Plant ki chimey se  $\text{CO}_2$   $\text{SO}_2$  &  $\text{NO}_x$  nikalte h

$\text{SO}_2$  &  $\text{NO}_x$  ki wagah se acid rain hoti h.

Acid rain me sulphuric acid  $H_2SO_4$  Nitric acid  $HNO_3$   
ka content hota h.



Tibet monsoon region se Tsangpo (Brahmaputra)

Nikkaluk east lehli h

ye ek high ramp valley h

yangtze pass se v shape gorge

Bonate hre ye oruna se

India ghusti h

Ye river 3 states se lehli h

(1) Arunachal

(2) Ass

(3) Megh

Assam me ye fertile plains  
banat h jahan india ka biggest  
riverine island - \* Majuli \* h.

Sangpo ki major tributaries in india

① Dholi

② Dihang - dibang

③ Manas

④ Teesta h.

Tista sikkim se nikalii h

NB hote hue bangladesh me  
brahmaputra se milti h.

Tista or india & bangladesh  
me wtr treaty h

West bengal me tista ke kinare  
darjeeling me tea farming hoti h.

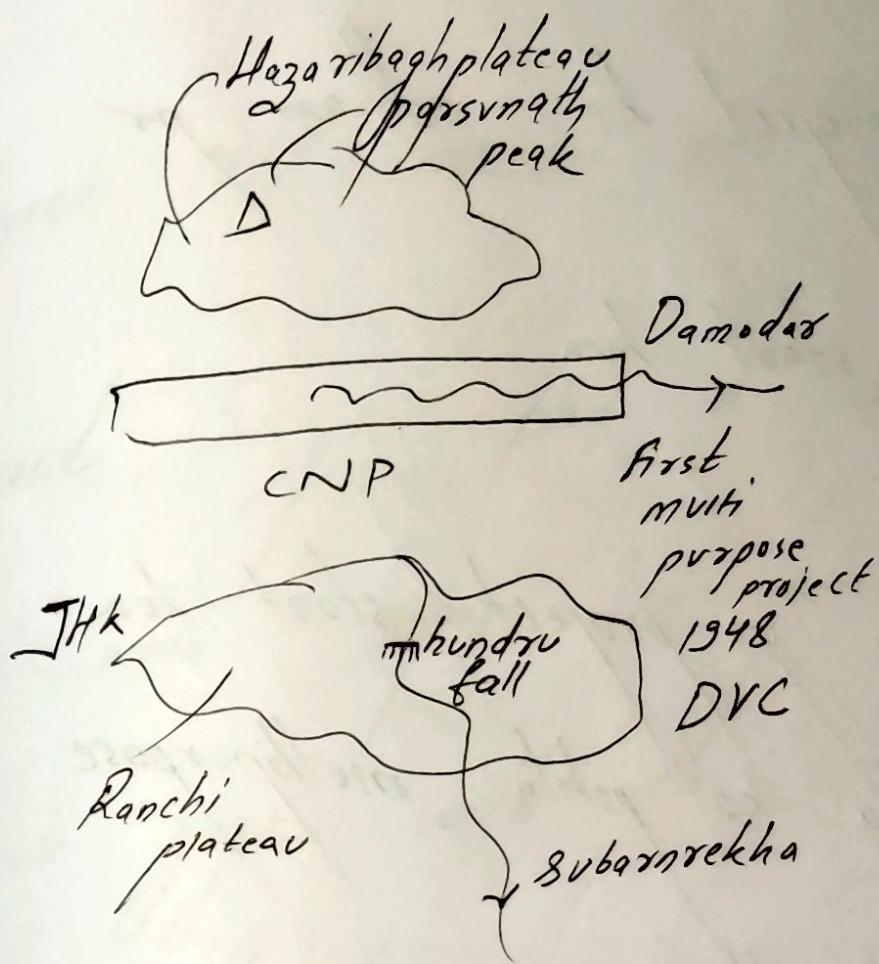
Bangladesh me brahmaputra ko Jamuna bolte h.

Jab ge padma (Ganga) se mil jati h  
toh joint stream ko megna bolte h.

Hoogly padma & jamuna milkar  
world's biggest delta banati h  
jise ganga brahmaputra delta bolte h.

18 Nov 25

- Ganga river pr WB me Farakka barrage banaye h.
- is barrage ke sheek age chikko ganga split ho jati h Hoogly & Padma.
- Brahmaputra ki other 2 tributaries
  - ① Sankosh & Purna h
  - ② Barak
    - manipur se nikali h & bangladesh me jaakar brahmaputra se milti h.



Damodar river koisme one wale  
 floods k karan sorrow of bengal  
 bolte the jise control krne  
 british period me 1930 me  
 trial shuru hua.

America ke Tennessee River  
valley project ke adhaara pr  
DVC start hua

1948 me ye project start hua  
jo india ka pehla multipurpose  
project tha.

Damodar river rift valley se  
hukar behri h.

CNP plateau ka comparison Germany k

ruhr valley ga rhine valley se katch

kyonki CWP mineral rich belt h.

Second 5 yr plan & durrant  
isi area & aspas katti steel plants

khole gaye with the technical  
support of foreign countries

① Bokaro, Bhilai - Russia

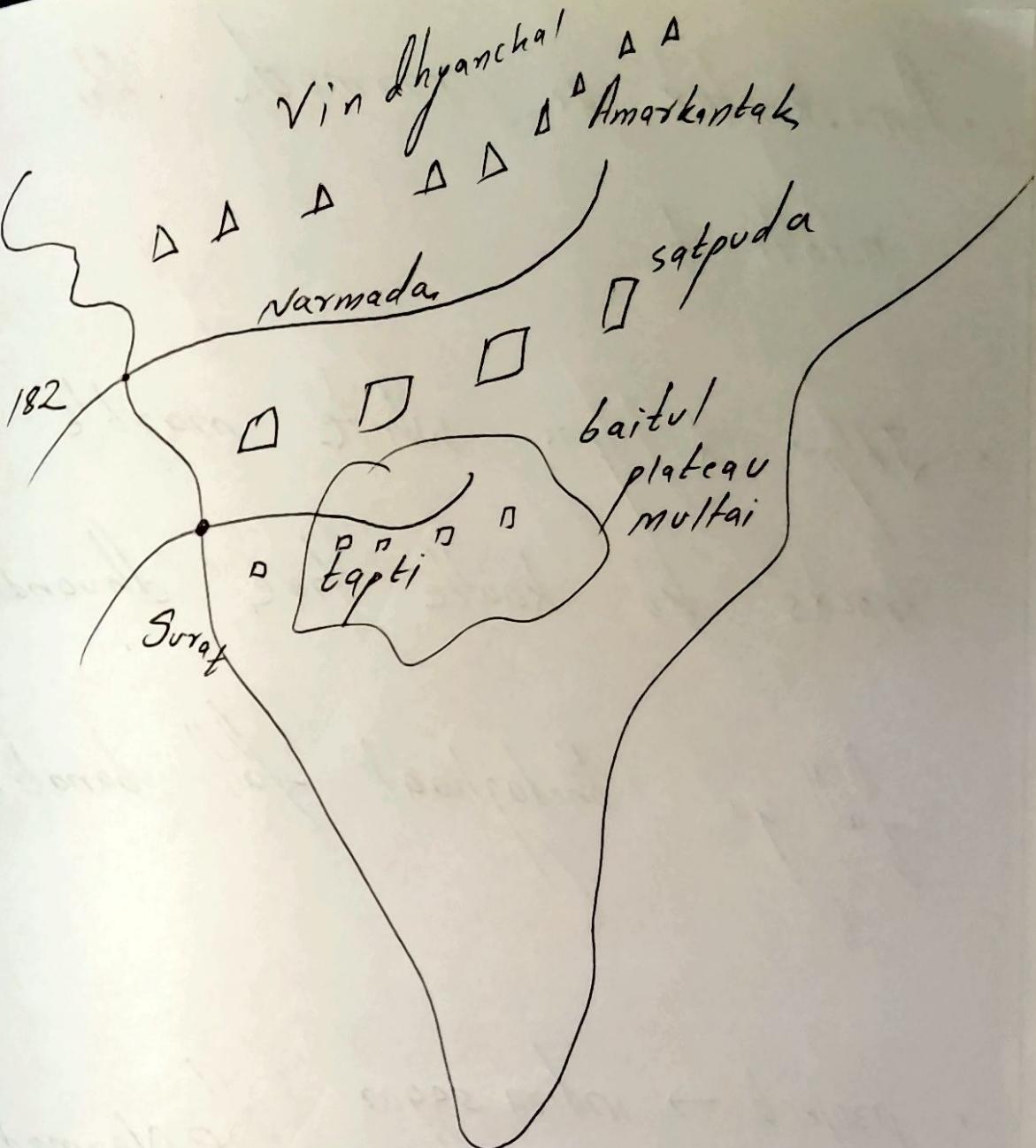
② Durgapur - UK

③ Dourkela / Ruhr-kela = Germany

• Note BSP geographically Mahanadi plains me located h.

• Bramhani & Baitarni nadiyaen mahandi ke upper drainage basin ka hissa h jinke beecharikanika mangrove h

• Sankh & koel rivers sourkela me milti h & bramhani river sonati h.



Mp se do major West flowing  
 rivers nikali h jo gulf of  
 Cambay me gir li h Narmada  
 Tapti

• Amarkantak se narmada bhi  
nikalti h

• Jab k pas white marble  
rocks ko kaatte hye shuandhaar

fall ya bhedaghat fall banati h

• project → indira sagar  
sardar saoバー } Narmada

• brujat me jahaan narmada  
ocean se mili h. osse

theek pehle sadhuvre island h  
jahan sardar patel ki 182 mtr  
high statue h (vs seat = 182)

Varmada li helpers h → hiran  
itawa.  
Sher-  
Abanjas

MP me hi multai plateau ~~is~~ 00  
baitul plateau se fapti river  
nikalhi h jispas ukai project h.

- Tapti & kinare surat city h.
- tapti gujrat me do <sup>isla/nd</sup> ~~aliabet~~
- 8 khaliyabet banati hai.
- Satpuda or Tapti river & south me  
3 parallel mounthong milte h.  
MP se MH ki ore

Balaghat Harischandoo &  
Ajanta

✓ Indira gandhi canal jaisalmer tk jati h  
jaisalmer india, as driest place h.

✓ Tapti river pe ukai project ka other  
name h vallabh sagar project

Note: Sardar sarovar. } Narmada pe h  
Indira sagar proj }  
jbbki vallabh sagar } project  
river pr h Tapti

19 Nov 25

GEO

- Godavari ka origin MH me  
western ghat ke easter slope pr  
located h Nasik district ki  
Trambakeshwar hills se h.
- ye nadi east flowing h &  
deccan plateau ka erosion kothi h
- iski main tributaries h
  - purna
  - pranhita
  - manjara

Penggong  
wainganga

Indravati

Bhabri.

Manjara river pe nizam sagar  
project h jo 1934 C puchah.  
me hyderabad k, nawab  
banwala

Other projects

Jayakwadi MH me h.

Jabki polararam rg telang border peh  
gana  
under construction h.

• godawari river pr telangana

me kaleshwaram project h

jo lift irrign project h.

• Rajmundry godawri ke bank pr h

jahan godawri split ho jati h

into two parts

Northern <sup>stry</sup> Gavtami godavri

Southern " Vashishth "

jske bad delta banate BOB  
me mil jiti h.

In dono streams k beech  
konaseema tatiya maidaan h  
jo AP ka coastal plain h.

Rajmundry = tobacco research  
famous for institute

bodawri ko south ganga bhi  
bolte h.

• Tobacco research ko  
rename kijo National Institute  
for research on Commercial  
Agriculture.

### # Krishna river

- origin MH ke mahabaleshwar hill se h
- main tributaries  
Koyna - Koyna dam jo ab  
eg. prone zone b.  
Bheem,

tungbhadrā

Moosi

Tungphadra & Krishna k beech

fertile doab ko raichoo doab

bolte h.

Vijay nagar remains jinko karnatak  
me hampi bolte h. tungbhadrā  
ke bank pr h.

Moosi k kinare hyderabad h.

krishna river per almgatti dam  
\\$ Nagarjun sagar project h

krisha & godavari rivers k  
beech koluru lake h jo india  
me freshwater <sup>2nd biggest</sup> lake h

krishna river k delta k  
South me pennar river  
flow krti h jo AP me

canyon banati h iska Grand kota canyon

bolte h

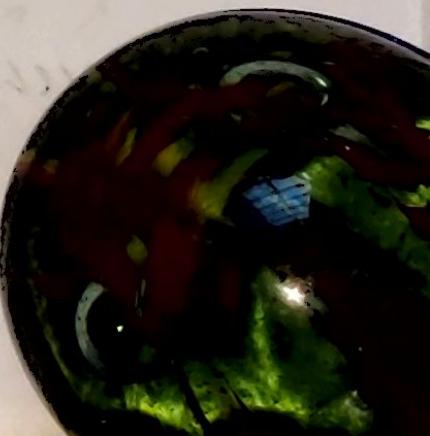
is ka comparison America k Grand

Canyon se hoti h jo colorado river

banati h

## # kaveri

- karnatak ke brahmghin se origin
- kaveri ki major tributaries
  - kabin



- . karnatak me kareen pr  
krishnraj sagar dam h 18  
kabini iski helper h.
- . karnatak se ye ziree TN  
ghusti h jahan ispr Mettur  
project bana h.
- . Ye britist period me bana  
project tha jiska purpose  
Madras ko wtr supply tha.

- Cultural capital tanjore kaveri  
k kinare h jahan famous brihadeswar  
temple h. jo rajraj<sup>2</sup> chola 2 h
- darg banana gaya tha
- isi area me salem h jo iron  
industry k lie famous h.
- kaveri' eastern coast me delta  
banati h jo fertile delta h.

- is delta se pehli is river jo grand anicut h
- karein k delta me hi Karaikal h jo puducherry UT ka part h
- # Western ghats ki kuch rivers east flow na kr west flow krti h &
- Arabian sea me mil jati h

• jaise gao me behne wali Mandvi  
jigke bank pe panjim h.

• karnatak ki shararati river jo  
karnatak me india ka waterfall

Jog / Gersoppa / Mahatma Gandhi fall  
banati h.

• Uske bad ye river arabian sea  
me miljati h.

• keral ki main river periyar : shi

west flow krte arab saas

me mil jati h is river pe

idukki project h.

• iske alawa ck other river

h Bharat <sup>Punj</sup> ~~Assam~~ jo western

flow krte arab saas me

mil jati h.

• kerala me kaii lagoons h

jahaan seawater coast k andar  
tk aa jata h inhe backwaters

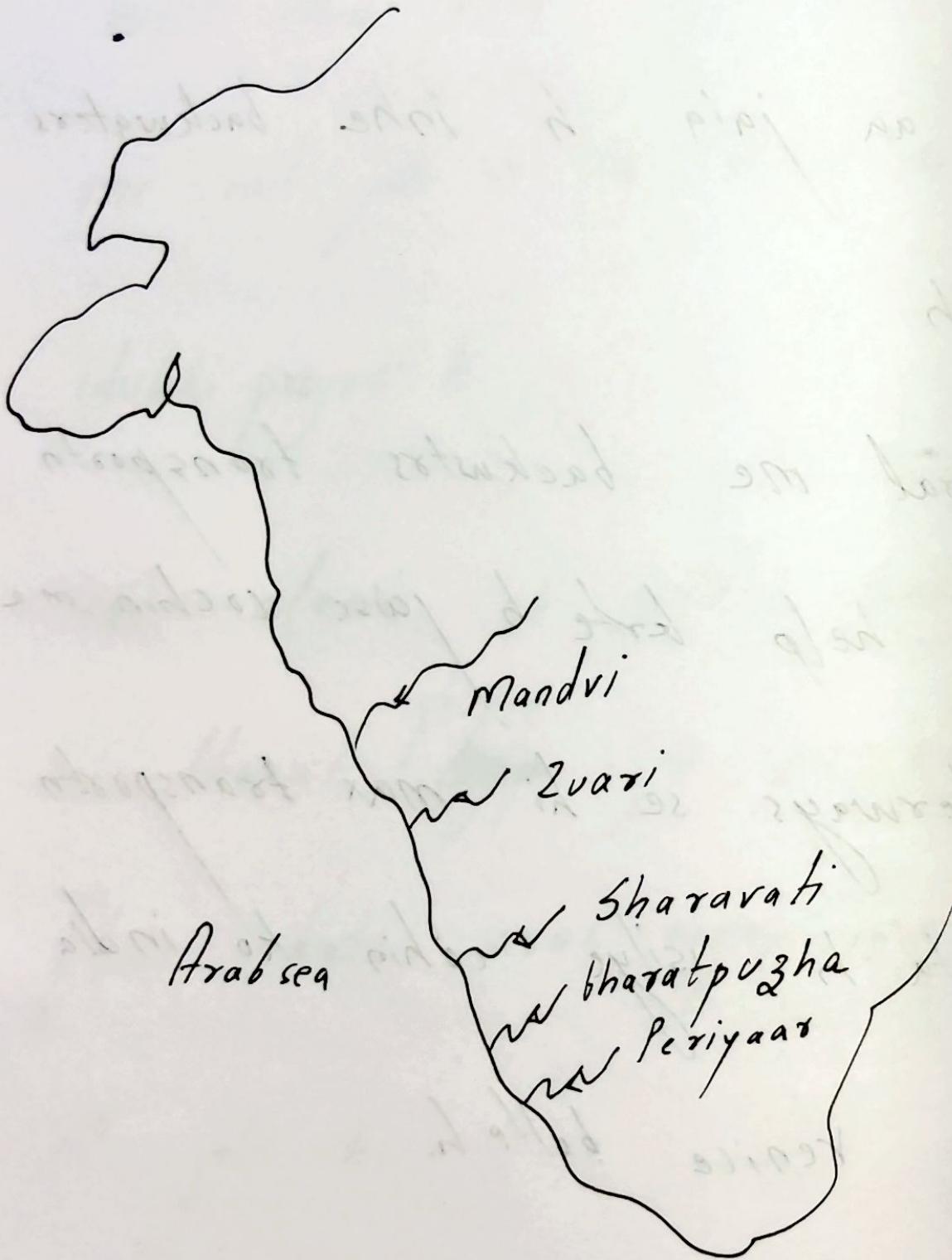
bolte h

keral me backwaters transport  
me help kerte h jaise cochin me  
waterways se hi max transport  
hota h isilye cochin ko india

ka venice bolte h.

kerla ke backwaters ko jod kr

national waterway<sup>No 3</sup> h kollam to  
kottapuram.



Kerala me kuch popular lake h

jisme main Vembanad h

Ashtamudi famous h.



Urban population % age

Urban pop %  $\approx 31\%$   
 $= 31.14\%$

Max urban pop = 6709  
Min : Himachal pradesh } ratio

pop based max urban pop = MH  
pop " min " " " Sik

Tribes

Doda

found  
Nilgiri range

→ specific: barrel shaped or half  
barrel houses

→ livelihood: Buffalo palan

Dairy work

buffalo ko holy  
mante h

inke art forms me

geometrical shapes use  
hotc h.



District wise Max pop<sup>dec</sup>: MH Thane

Max density: Delhi  
NE  
Delhi

Min pop den: Arunachal P

Max lit zilla: ~~Serchhip Mizoram~~  
~~Aizawl~~

Min lit rate place MP Alirajpur

Kandla port Gujarat estd 1965  
(SEZ)

1965 - SEZ policy started by govt

2017 kandla port name changed  
to deendayal yodhyay port

kochi airport india ka first  
100% solar energy pe chalne  
wala airport.

Alappuzha port kerala

Vikhapatnam port = Dolphine  
port No. 6016

one of the best ports of  
india in terms of functioning  
in terms of EIA.

Orissa me Gajihat hills

2011 ke census ke according

Child population <sup>in</sup> ~~is~~ India

0-6 yr baccho ke total 18.11.5

Area ke basis pr largest state  $\rightarrow$  Raj

Smallest state  $\rightarrow$  Goa.

Pop ke terms me

$\rightarrow$  UP biggest

smallest  $\rightarrow$  Sikkim

Puducherry women  $\rightarrow$  max compared  
Sex ratio to men

Min  $\rightarrow$  Haryana.

UT Delhi max pop

UT Lakshadweep min po,

UT pop growth  $\therefore$  max  $\rightarrow$  Dadra  
Naveli

min  $\rightarrow$  Lakshadweep

Sex ratio more than 1000  $\therefore$  top : kerala

top 5 : (6)  
(4<sup>th</sup>)

Sex ratio : 6 : 991/1000

Sex ratio : UT : max : 1037/1000  
puddu

" " min : 618/1000  
lokosa  
daman  
deer

Sex ratio : 0-6 yr olds : 919  
/1000

@ all  
india  
level

Sex ratio : 0-6 years : best : AP

worst : Haryana

(6 : 479 : 969  
rank : /1000

UT : Sex ratio : 0-6 yrs old : Max. delhi  
Min. : ABN

Bew ke ansaar. 50 lakh se adhik  
(check)

abaadi wale total 4 sheher 81 Thols

① Hyd ② Pune ③ Bang ~~Hyd~~ + ④ Thruj  
(Ahmedabad)

Pop : More than 10 Lakh : cities : 53

UT :: Lit :: best :: Lakshdweep 91.6%  
Worst :: DSN Haveli

SL :: pop :: max :: Delhi

min :: ASN 8

Lakshdweep :: 0

pop% :: max :: Chandigarh  
min :: ASN :: 0

Note P&H Me st pop 0%.

UT :: ST :: Max :: DSNH

Min :: Chandigarh Delhi  
Puducherry ; 0

UT :: ST % :: max :: Lakshadweep

min :: Chandigarh Delhi  
Puducherry = 0

Pop :: Religion based :: Max hindu :: 79.80

Mus 14.23

Christ 2.3

Sik 1.72

Buddh .70

Fain .37

Others .65

6 minorities

① Mus  $\gg$  ② Christ  $\gg$  ③ Sikhs  $\gg$

④ Bud  $\gg$  ⑤ Jain  $\gg$  ⑥ Parsi

MCS BJP

Gaddi tribe :: Locn :: HP

livelihood :: Sheep goat  
palan

pattern :: migrate a/c  
of living to weather  
to grazing  
cattle

Religion :: Shiva worship

Bhutia :: Lach :: tibetian plateau Sikkim

Mostly  
found in  
big pop in Darjeeling

Tribes :: found in western dhaar ::

Shi' gond wa'st goras

Tribes :: Manipur :: Coochie/kuki tribe



tribes Andolan before azaadi : kooka  
and log

year 1857

tribes Meghalaya : haro khasi Jayantia  
Karbis

Nagaland : Angami

Sikkim : Lepchas bhutias

Tripara : Chakma.

## Concept of albedo:

- koi surface kitni solar radiation reflect kota h.
- essentially ek reflection coefficient
- albedo matlab whiteness
- Range 0 to 1
- formula 
$$\frac{\text{Reflected sunlight}}{\text{total incoming sunlight}}$$
- taza giri barf ke comparison me dark & dooph surface zyada



sunlight absorb kota h.

• Snow (white) <sup>wet &</sup> albedo : .85

• Asphalt roads dense forests

open oceans have low

albedo refractive index

## Tsunami

dependent event

2008 me TN me

nagapattinam

post desoto  
red