

Episode 18

Paani laga pollution(Water Pollution)

Translator- Benjongtoshi jamir

Samuel- Father

Victoria- Mother

Roland- son

John- Uncle(Father's friend)

#####Opening part of title song & announcement#####

Etu episode teh honibabo paani laga alaag alag kisum. Aro alaag traditional techniques laga bhi jaankari koribo. Aro jaanibo paani laga purifying techniques.

#####Part of title song continues#####

Scene:- Etu deobar rati bua, khorot ekta time khormanu nejie mhon khota pati lua.

Samuel:- Victoria.... abunar honi aseh? Boila pura Roland aru Amber picnic jabo koa aseh.

Victoria:- Hoi, tar ki-ki programme pona aseh, aru abunar ki deobar din bi eman buzy hoi. Bhal ba-nai niji khor manu karoni time napa toh.

Samuel:- Moi-i nahoi sob Press Reporter etu kam hoi. Etia ki hobu najani, Kiba hoile etia jabo lakibo, News koroni coverage, huru hobi tangur hobi, amar kam toh, abunar MNC nishina nahoi, emergency hoile khor bora kam hoi aru ki moi toh spot jabo lakibo.

Victoria:- Samuel... Gandhi Bhawan ot Water Exhibition khota toh honishe? Amar colleagues kan etu koi taki she. Ek chun tati taka ase.

Samuel:- Hoi Victoria! Abunar thik koa aseh, Amarbi dekhishe etu Water conservation exhibition toh, City Hall teh etu quality aru purity kota bathi taka aseh. Aru ekta moi sati Mr. John bi tadi eki taka ase

Roland:- Papa, picnic karoni aro olob kobhi?

Samuel:- Exhibition toh Gandhi Park osor ase. Toh boila amikan exhibition jabo aro park teh picnic manibo, hobho?

Roland:- Thik aseh Mummy lokot boila koithibo noh.

Scene Change proceeding to second room...

change over music#### sound effects of cars/horns/streets####

Roland:- Papa, Gandhi Bhawan aro kiman thur?

Victoria:- Oh! Sabi..... signboard toh. ..Etu Gandhi Bhawan. Exhibition site bhongjishe, jaka toh beshi bhal na?

Roland:- Accha, exhibition toh yateh hoboleh ase.

Samuel:- Rukhibi Roland...rukhibi..tateh sabi toh.... exhibition Hall toh ehtoh , mane Exhibition venue.

Victoria:- Poila John uncle keh besaribi lakibo. Tharhoile modot hobo aro ekdom bujai ti bo

Roland:- Hoi mummy, moi mon teh question beshi aseh. Eto hoili moi project work teh eman motot hobo.

Samuel:- Sabhitoh-sabhitoh... John tathi aseh. Hello... hello.... John..!

John:- Hello Samuel! Good morning. Asurit hoishe apuni keh yateh lok pabole. Sob bhal na?

John:- Hello Roland.... keneka aseh? Eman smart tiki aseh.

Roland: Good morning Uncle. Beshi bhal aro abunar kinika (laughing)

John:- Bhal hoise apunar kan exhibition sabo ahia toh.

Samuel:- Moitoh exhibition soboli baar-bar ahi takhi, coverage aro report karone.

John:- Apunar lokot kota koa nahoi Samuel. Etu moi chotu dos karoni(laughing).Bhal hoise apunar kan sob sabo paribo. Paani aro purification laka information beshi babo.

Roland:- Uncle please olob motot koribi etu water purification aro harvesting teh ki technology bora koriseh

John :- Kileh nakobo? Ahibi moilokot.

Samuel :- Chalo.

####(Scene and Music Changed)#####

Roland- Wow! Etu Poster sabhi toh. paani distribution system toh eman simple teh explain kori teshe. Uthateh sabi toh....likhe ase duniya laga 71% toh paani para hi bhorta. Hoilebhi 3% hi kabholeh pareh. Asurit nahoi? Beshibhag paani toh polar regions teh glacier laga roop teh ase. Toh manu kabholeh paria paani toh beshi hi kom.

Victoria: Roland, etu sob yaad kurina likhibi teh.

Samuel: John apuni bhi eki hi kobho hola. Kabholeh paria paani to kom hoi jai ase din para din teh. Ekta side teh polluted paani health karuneh beshi biya anidi ase.

John: Hoi Samuel...apuni thik koishe. World health Organization study koishe ki cholera bimaar 90% para aru Dysentery 50% para nijeh hobo kitia sapha paani istemal kuribo.

Roland: Hoilebhi sukhu paara toh dekhibo napareh paani sapha na nahoi.

John: Roland! Etu karuneh etu exhibition toh. Yateh para apunar jaanibo kontu paani istemal kuribo paribo kabholeh karuneh aru kontu naparibo. Apunar aru jaanibo paani lga pollutiob teh kontu pollutants ase. Kontu Traditional Techniques ase Paani ke purufy koribole? Aru apunar etu bhi jaanibo ajikali latest technologies ki ase paani purify kuribole.

Victoria: Pollutants para paani laga nature hi bodli kureh. Paani laga physical, chemical aru alaag properties bodli hoi jai kitia alaag souluble materials paani logot milai loi. Etu ekta factor ase paani pollution karuneh. Paani laga pollution toh beshi kisum hobo

pareh taki Physical pollution, organic aru non-organic pollutions. Etu pesticides aru fertilizers para bhi water pollution hoi jai.

John: Uthu kun materials para paani laga colour,taste, odour aru flavour bodli kureh uthu para physical pollution ani de. Kunba toh colour bodli kureh aru kunba odour aru taste. Ekbar ekbar toh paani laga taste bhi bodli kuri de.

Victoria: Sabitoh posters kan toh...likhi ase ki pure paani toh colourless, tasteless and odour nai. Paani toh carbon aru Hydrogen para bonai hoi. Pure paani laga PH toh 7 para 8.5 tak ase.

Roland: Uncle! PH toh ki ase?

John: Roland! Moi kan paani laga purity PH para jaaneh. PH paani laga acidity nahoile alkalinity dikhai teh. PH scale toh 1 para 14 tak ase. Kitia PH 7 para kom....etu matlaab paani toh acidic aru kitia 7 para beshi Paani toh alkaline.

Samuel: Roland, sabi toh yateh...Ki likhi kena ase? Natural paani teh potassium, sodium, Magnesium, calcium, fluoride, sulphate, carbonate, bi-carbonate, nitrate etc ase. Paani teh nimok taste toh nimok karuneh.

John: Hoi . Etu karune paani laga taste to jagah jagah para alaag ase. Etu tohpaani tehnimokan milai na thakia para.

Victoria: Bacchakan...sabhi tateh. Paani toh twita kisum. Ekta kisum teh fluoride,sulphate, carbonate etc nai. Etu kisum paani kan toh soft aru meetha ase.

Roland: Uncle! Moikan nijor asaani para kinekaa paani test kuribo pareh?

John: Meetha aru soft paani teh sapun(soap) joldi milabo pareh aru foam bhi beshi dobho. Kintu Hard paani teh sapun para foam beshi olai nathibo. Dekshi thola, khosol kuria aru kapur thola para paani laga pollution hoi. Etu sob toh chemical products karuneh. Nalaa teh moila para bhi paani keh pollute kueh. Etu teh ghor aru offices laga bathroom para paikhana kan aru organic aru non-organic wastes kan- etu kan sob toh solid waste aru organic. Bimaar laga kitanu(microbes) bhi zamil thakeh. Aro eneh pahaar

teh felai na thakia manu aru janwaar laga paikhana para paani keh pollute kureh.

Samuel: Etu opor industrial waste para paani keh letera kureh. Etu teh acid, alkaline, salts, fats, oils, metallic elements aru hazardous chemicals. Paper, sugar, textile, leather, beverage, drugs, food processing, colour dying aru fertilizer Industries para wastes toh beshi olai-etu para paani teh pollution ani de.

John: Apuni honi kina asurit hobo ki agricultural waste para bhi paani keh pollution ani de.

Roland: Agriculture aru farming para bhi paani teh pollution ani de?...Surprise!!

Samuel: Roland! Khedi teh harvest bhal hobo karuneh farmers kan notun technology jolai de. Aru etu toh pesticides aru fertilizers.

John: Chemical fertilizers teh main component toh nitrogen. Excess Nitrogen toh paani teh homai loi aru etu para detoxification hoi. Etu para anaerobic bacteria beshi hobo teh. Aru etu biological waste para paani teh oxygen kom kureh. Etu para aru living organisms morai kuntu para paani teh pollution hoi jai.

Samuel: Apuni jaani thakishe? Pesticides aru weedicides teh mercury, lead, chlorine, phosphate, arsenic etc ase. Mismanagement aru galti methods para khedi soil erosion hoi jai. Soil erosion toh din para din beshi hi hoi jai ase. Matthi aru soil sediment para water pollution hoi jai.

John: Thermal pplants laga high temperature para bhi paani teh pollution loi aneh. Nuclear power plants teh heat tubes toh paani laga circulation para thanda kureh aru etu karne paani toh nudi aru reservoirs para loi aneh. Cooling process beshi teh paani toh reservoirs teh hi jhari teh. Itu para paani laga oxygen kom kurei aru salts laga contents beshi kuri de.

Samuel: Aru honi kina thakibo paani teh oil leakages. Etu para maas(fish) beshi morai de. Etu oil pollution paani teh. Etu pollution toh beshibhag oceans aru seas teh hoi. Oil leakage jahass(ships) para

hoi thakeh aru etu para paani teh oxygen content kom kureh aru living organisms suffocate kuri de.

Roland: Ayaaa emaan letera paani teh! Moikan kineka purify kuribo pareh?

Victoria: Roland moikan laga desh teh toh poila para traditional technology hi istemal kuri ase.

Samuel: John! Apuni eneka Technology oku yaad teh ase? Moi baccha zamana teh bosti laga walls kan teh “Use water after filtering and have after proper assessment” likhia yaad ase.

John: Hoi Roland! Paani laga filtration karne kapur(cloths) istemaal kuria ekta asaan aru purana tradition thakishe.

Victoria: Aru epidemic vakt teh paani toh boil kuri he kabho lageh.

Samuel: Moikan yaad rakhibo lageh paani toh bhal para sapha kurikina heh container teh rakhibo lageh.

John: Ayurveda teh bhi eneka techniques beshi koi na ase. Alaag kisum laga herbal leaves aru seeds paani laga treatment karuneh kuri thakishe. Ekta example toh sahajan ghaas laga seeds.

Samuel: Purana traditional techniques yeh paani keh kineka purify kuribo sob likhi kina ase. Aru etu opor paani laga purity bhi saboleh.

Roland: Toh aji kali kileh etu istemal nakureh?

Amber: sabhi toh...aru ekta notun technology dikhai ase. Yateh paani laga purification toh filtration para kureh. Pathor olop chootu nijeh teh etu beshi teh chotu pathor aro etu beshi teh paluu(sand) opor teh paani filtration karuneh. Etu process para paani purify hoi jai.

Samuel: Paani coke laga opor teh hali leh tai laga smell aru aru odor felai de. Itu process teh paani koila teh pass kuri de. Etu para dissolved carbon dioxide aru hydrogen sulphide gas felai de paani para.

Roland: Paani laga purification teh kunba chemicals bhi istemal kureh na?

Samuel: Hoi....apuni ethukan sob exhibition laga second part teh dikhibo. Copper sulphate para small algae morai de. Bacteria aro micro-

organisms chlorination aru bleaching powder para morai de.
Ozonization para bhi moikan micro-organisms keh morabo pareh.

Victoria: John! Bosti jagah teh kuntu chemicals istemal kureh gua laga paani purify kuribole.

John: Etu toh tai kan “Kaak” mate...potassium permanganate... etu gua (well)teh haleh. Etu para bacteria morai de. Ultra-violet rays para bhi paani teh microbes morai de.

Samuel: Phittkari koina nimok bhi istemal kureh nahoi...matlaab toh Alum paani laga purification karne.

Samuel: Etu process teh paani eneh comlex process para phoric sulphate, phoric chloride aru lime teh pass kuri de.

Roland: Toh moikan kineka jaanibo sapha aru sapha nahua paani?

Victoria: Paani laga purity janibole laboratory kunba teh jabo lageh. Ghor teh kunba kits istemal kurina paribo.

Samuel: Technology nathakiya time teh manukan ekdom expert thakishe paani laga purity saboleh. Tai kan paani ke sai kina aru paani laga surrounding habitat saina hi kobo pareh thakishe.

John: Paani toh sapha aru taste bhi bhal hobo hoilebhi khaboleh thik bhi nahobo pareh. Aji kali modern techniques istemal kurina paani ke judge kuribo pareh.

Samuel: Paani teh dissolved oxygen measure kurina paani laga purity sabo pareh. Ami kan laga desh teh kunba parameters aru standard rakhi kena ase kabho paria paani karne. Paani teh moila 25ppm para beshi nahobo lageh.

Roland: Uncle! Ppm matlab ki ase?

John: Roland! Ppm toh uthu limit ase substance laga one tenth of a million. Moi kobo mun ja tho part per million. 25 ppm kua toh dos lakh teh 25....clear??

Roland: Hoi jaanishe uncle.

- John:** Aru pure paani laga hardness toh 600ppm para beshi nahobo lageh. PH toh 6.3 to 9.2 majot hobo lageh. Chloride, arsenic, cadmium, chromium, lead aru mercury toh prescribed limit para beshi nahobo lageh. Itu para moikan laga sharir teh oku dukh napungjabo lageh. Limit par hoile health karne dukh hobo. Heavy elements aru nitrate products para long-term side effects loikina ane bacha kan ke aro burra-buri manu keh.
- Victoria:** West Bengal, Bihar, Jharkhand aru U.P. teh khaboleh paani teh arsenic zamil hua para beshi dukh loi anishe. Skin diseases aru cancer hoi jaishe.
- Roland:** Yateh dikhibo techniques paani purification karuneh. Sediment filtration process ekta asaan technique ase. Etu process teh pores toh 20 micron para kom ase. Etu para sediments aru suspended particle paani para felai de. Copper sulphate bhi suspended particles fela bole beshi istemaal kurei.
- John:** Council of Scientific and Industrial Research ...CSIR labs para filter bonaishe kuntu para paani para impurity felai de.
- Victoria:** Bacchakan...ahibhi....yateh apuni paani teh bacteria thakia jaanibo. Paani teh Biological impurities fungus, bacteria, protozoa, pathogens, micro-organisms, parasites aru tai laga anda(eggs) thakia karne hoi. Milaina tai kan ke micro-organisms nahoile germs koi. Germs para infect kuria paani para health teh beshi dukh aneh. Hoilebhi esor morom aji kali treatment asaan ase.
- Samuel:** Ami kan laga desh teh health problem beshibhag infected paani kha para hoi. Kitia microbes laga infected paani istemal kuribo typhoid, dysentery aru vomiting aru typhus bimaar loi ane.
- Victoria:** Etu poster teh dikhia ase ki duniya teh 1.6 million manu infected paani kha par muri jaishe. Etu para ami kan laga economy aru employability teh bhi dukh aneh. Duniya teh 2030 tak teh sob karne sapha pure paani anibole kuri ase.
- Samuel:** Ami kan laga desh teh NITI Ayog para khabo paria paani sob keh anibole kaam kuri ase.

John: Etu karuneh traditional aru modern techniques bhi istemall kuri ase. Itu toh beshi bhal para uthu poster teh dikhai ase.

Roland: Wow!! Itu sob information moi karne beshi bhal hobo. Moi laga project toh bhal bitor teh hobo.

John: Roland! Etu information khali apuni laga project karne nahoi hoilebhi aopuni etu alaag manu keh bhi jankari dibho paribo.

Victoria: Hoi....bhal khota toh satthi kan bhi aru alaag manu ke bho kobo lageh.

Samuel: Paani hoile...etu toh sob manu keh jankari dibo lageh. Eneka hoile hi nature para gift dia toh share hobo.

#####Musical Effect#####

#####Closing announcement#####

#####Closing part of Signature tune#####