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Assignment 4

1) Explain what is Municipal solid waste is (MSW) means.

Municipal solid waste is defined to include refuse from households, non-hazardous solid waste from industrial commercial and institutional establishments ( including hospital) ,market waste ,yard waste and street sweeping semisolid wastes such as sludge and nights oil are considered to be the responsibility of liquid waste management systems ,while hazardous industrial and medical wastes are by definition not components of municipal solid waste. They are normally quitted difficult to separate from municipal solid waste particularly when there sources are small and scattered WSWM systems should through and include special measures for preventing hazardous materials from entering the waste and to the extent that this cannot be ensured alleviating the serious consequences that arise when they do, finally ,debris from construction and demolition constitute-difficult categories of waste which categories of waste which also require separate management is a cyclical process of setting objectives establishing long term plans ,Programming ,budgeting , implementation operation and maintenance ,monitoring and evaluation, cost control, revision of objectives and planes and so forth management of urban infrastructure services is a basic responsibility of the municipal Government .It is usually advantageous to execute services provision task in partnership with private enterprises (privatization) and /or with in users of services ( participations but the final responsibility remain that of the Government.

Municipal solid waste management ( MSWM) refers to the collection, transfer, treatment, recycling, resource recovery and disposal of solid waste in urban areas.

2 ) Explain the importance of the following (MSW) properties in solid waste management or treatment.

Municipal solid waste management ( MSWM ) is a major responsibility of local government typically consuming between 20% to 50% of municipal budgets in developing Countries ,It is a complex task which depends as a much up on organization and cooperation between households communities , Private enterprises and municipal authorities as it does up on the selection and application of appropriate technical solution for waste collection transfer, recycling and disposal , furthermore ,waste management is an essential task which has important consequences for public health and wellbeing the quality and sustainability of the urban environment and the efficiency and productivities of the urban economic.

In most cities of developing countries, waste management is inadequate; a significant part of the population does not have access, to a waste collection services and only a fraction of the generated waste is actually collected systems for transfer recycling and or disposal of solid waste are unsatisfactory from the environmental, economic and financial points of view. In recent years, WSWM has attracted increasing attention from bilateral development agencies due to the mounting urgency of urban environmental problems and increasing concern for capacity building at the level of municipal management with its broad organization implications and close links to other sectors ,MSWM constitutes an important entry point for integrated unbar management support, ( WASH MODULES 4,page 93 ).

3 ) outline the advantages and disadvantages of source, separation of WSM;

The possible indirect advantages of sources separation include;

1) Decrease air and water pollution from land fill activities,

2) Net saving from avoiding negative impacts on the environment on worker health on energy, and on resources from the production of virgin materials.

3 ) Improved balance of trade from substituting recycled for imported virgin materials.

4) Communities with source separation programs are seen to be forward –looking.

5 ) Benefits from a sense of personal involvement in conservation activities,

The disadvantages of source separation are

1. ) Only apportion of the waste generated can be recovered ,
2. ) It leaves a mixed waste residue that has somewhat lower fuel content than un-separated mixed waste ,
3. )It strongly depends on individual participation and cooperation,
4. )It requires modification of the costly collection equipment used by both municipal and private haulers. ( Https /www.priceton edge)

Q 4) Discuss the challenges faced in surveillance.

Hearth out comes of relevance’s include death diseases ,injury, and disability ,However relating those out comes to specifics environmental hazards and exposures is critical to environmental public health surveillance, Hazards include Toxiechemical agents ,biomechanical stressors and biologic agents that are located in air water soil food ,and other environmental media .

Exposure surveillances; IS the monitoring of members of the population for the presence of an environmental agents, It metabolites, or it is clinically in apparent,

For example; sub clinical or preclinical, effects,

There is some four challenges complicate environmental public’s health surveillance;

1 ) First; The ability to link specific environmental causes to adverse out comes is limited by our poor understanding of diseases processes ,long lead times inadequate measures of exposure ,and multiple potential causes diseases,

2 ) Second; Data collection for other purposes rarely. Include sufficient information to meet a case definition for a condition caused by an environmental.

3) Third, public alarm is often out of proportion to the hazard of concern and sentiment will often influence public policy disproportionately to scientific information,

4) Fourth; biologic markers will become increasingly critical elements of environmental exposure surveillance,

Obtaining date on exposure which include estimated derived from hazard data through sophisticated modeling or direct measurement of individual exposure obtained from use of personal monitors, (For example, passive air samples) is generally impractical in developing countries, childhood lead levels are the only bio monitoring data that are collected routinely in several counties, either in national surveys or from severing programs for children at high risk,

Health outcomes surveillance as a applied to environmental public health is similar to traditional surveillance efforts , In the united states the focus is on surveillance for birth defects ,developmental dis abilities ( For example , cerebral palsy , autism, and mental retardation ) asthma and other chronic respiratory disease ( for example , bronchitis and emphysema) ,cancer ,and neurological diseases ( for example, Parkinson’s disease, multiple sclerosis ,and Alzheimer’s diseases) Other nations have different sets of priority conditions for surveillances , Disease registries , vital statistics data annual health surveys , and administrative data systems ( for example , hospital discharge data ) for sources that have been used for monitoring health condition , The challenges mentioned previously have constrained our ability in all nations regardless of level of development to establish and maintain effective and comprehensive environmental public health surveillance systems ,

As we invest in understanding the enlarging threats in the global environment , we must overcome those challenges and establish improved surveillance systems , The health of the global community depends on this ( Https www- cdc- mc Geehan, Quilters and Nisk or 2004 ),

Q 5 ) Explain 5 diseases that can be prevented by observing proper sanitation?

A ) Schistosomiasis;

Water –associated tropical disease schistosomiasis ,a water based parasitical disease ,best illustrates the complexities of the various water issues with which mostly , the rural poor are faces , For part of their lifecycles schestosoma parasites depend on aquatic snail , The diseases is maintained through fecal urine contamination of open water with parasite eggs , the presence of the snails and frequent confect for recreational domestic or occupational purposes, water management can play an important role in reducing transmission risk, but it must be combined with drag treatment the provision of safe drinking water and adequate sanitation ,Health education is also important, canals lining ,regular rapid drawn down of reservoirs, and increased flow rates in irrigation canals all favor snail elimination , but are only efficient ,if they have appositive effect on agricultural production at the sometime.

B ) Guinea worm disease; Guinea worm diseases is a humbly disfiguring disabling diseases caused by large nematode ( round worm ) which breeds in open water sources such as ponds and shallow well, people who drink this contaminated water become infected , As the diseases developed , They become progressively weakened and incapacitated , This has a profound effected on their ability to work to form and to go to school ,It takes about a year for the meter long worm to mature and start to release eggs , apian full and deforming process .

C ) Typhoid fever;

Typhoid fever is an acute illness an associated with fever caused by the salmonella enteric a serotype, Typhoid bacteria, it can also be caused by salmonella paratyphoid, are late bacterium that usually causes a less severe illness, The bacteria are deposited in water or food by a human carriers and are then spreads to other people in the areas,

Typhoid fever is connected by drinking or eating the bacteria in contaminated food or water , people with acute illness can contaminate the surrounding water supply through stool, which contains a high concentration of the bacterial contamination of the water supply can in turn taint the food supply ,The bacteria can survive for weeks in water dried sewage,

D ) Trachoma;

Trachoma is a chronic infectious diseases of conjunctiva and cornea ,caused by chhamydia trachomatis , but other pathogenic microorganisms often contributed to the disease , Trachoma inflammation may under going on spontaneous resolution or may progress to conjunctiva scarring which can cause in word deviation of eyelashes ( trihiasis ) or of the lid margin ( entropies ) ,The a abrasion of the corncobs eyelashes frequently result in corneal ulceration ,followed by scorning and visual lost,

From the public health point of view , trachoma is classified as blinding , A community with blinding trachoma can be recognized by the presence of persons with lesions such as entropies ,trihiasis and corneal ulcers , It is the blindness trachoma that require urgent control measures , Non-blinding trachoma often becomes blinding trachoma when other ocular pathogens synergistically and enhance the risk of damage to eyesight ,

Trachoma is major preventable diseases cause of blindness in developing countries, According to recent situates about 22 million people suffer from visual impairment due to trachoma and about 324. 85 million are at risk of infection,

The incidence and prevalence of trachoma has shown a significant decrease in many endemic countries of sear during the past few decades , the decrease has been mainly due to improve sanitation ,water and housing and implementation of control measures , ( PREVENTIVE AND SOCIAL MEDICINE, K ,PARK , page 282 ).

E ) CHOLERA,

Cholera is in acute, diarrheal illness caused by infection of the intestine with the toxigenic bacterium vibrio cholera sera group 01 or 0139, An estimated 29 million cases and 95000 deaths or occur each year around the world , The infection is often mild or without symptoms , but can sometimes be severe , A approximately one in 10 ( 10% ) infected persons will have severe diseases characterized by profuse watery diarrhea, vomiting and leg cramps , In those people , rapid loss of body ,fluid lead to dehydration and shock ,without treatment death can occur within hours ,

The cholera bacterium is usually found in water or food sources that have been contaminated by feces ( poop) from a person infected with cholera, Cholera is most likely to be found and spread in places with in adequate water treatment , poor sanitation and in adequate hygiene,

The cholera bacterium may also live in the environment in brackish rivers and coastal water , shell fish eaten raw have been a source of cholera ,and a few persons in the us have contracted cholera after eating raw or under cooked shell fish from the Gulf of Mexico , ( https /www ,center for DISEASE CONTROL AND PREVENTION , )

References

1 ) (Https /www, center for diseases control and prevention),

2) (Preventive and social medicine, k, park, page 282 ).

3 ) (Https /www, CDC, McGeehan, Quilters and Niskar 2004).

4 ) ( Https /www. Princeton, Edge) .

5 ) ( WASH MODULES 4, PAGE 93).