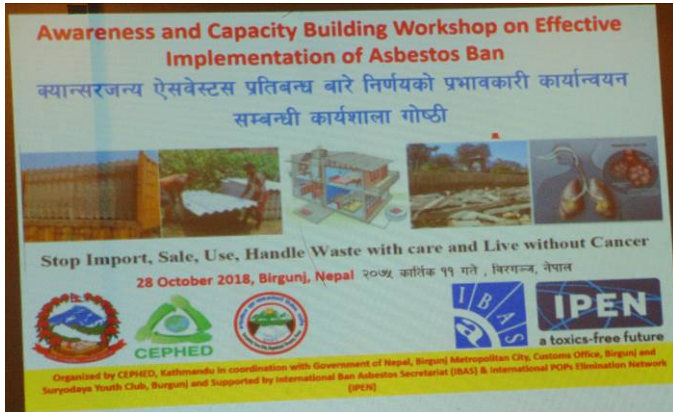
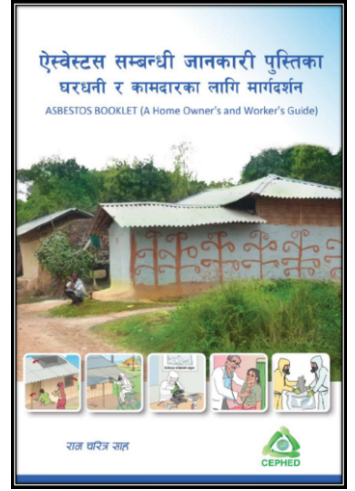
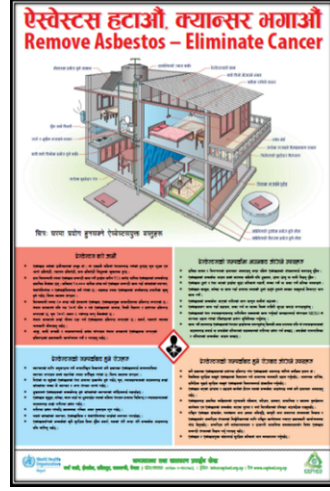
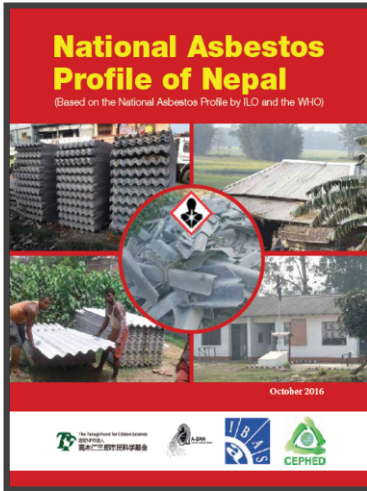


Effective Implementation of Asbestos Ban in Nepal



**Center for Public Health and Environmental Development
(CEPHED)**

Kathmandu, Nepal

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November 5, 2018

Effective Implementation of Asbestos Ban in Nepal

Introduction

CEPHED successfully conducted a series of asbestos-related studies; prepared, produced and widely disseminated a “National Asbestos Profile,” poster, fact sheet, and guidelines for house owners and workers; produced and broadcasted a radio jingle about asbestos; organized a series of awareness-raising and capacity-building workshops for different stakeholders, including custom officers, and shared findings of asbestos-related diseases (ARD) in Nepal.

Based on the CEPHED research-based campaign and advocacy, the government of Nepal banned asbestos on December 22, 2014, and this ban took effect on 20 June 2015. Nepal is the first country in South Asia that banned the import, sale, distribution and uses of all forms of asbestos and asbestos-containing materials, except the lining of break shoes and clutch plates. This ban will need effective implementation and regular monitoring, along with massive awareness-raising and capacity-building, to thus prevent the immediate risk from continued exposure from existing uses and also to help towards complete elimination of importation.

Exposure to asbestos causes lung cancer, mesothelioma and asbestosis (fibrosis of the lungs), and other outcomes.

Recent CEPHED publications, “National Asbestos Profile of Nepal 2016,” and Briefing Paper on 2017, clearly enumerated that the import of asbestos and asbestos-containing products has been substantially reduced, but not completely eliminated. Additionally, the prevention of continued exposure from the existing uses, along with the environmentally sound management of asbestos containing waste, is required to make working places and inhabitation safe. Thus, a program towards enhancing effective implementation of the asbestos ban decision (through organizing a stakeholder workshop in one of the potential boarder areas with a suspicion of still importing some asbestos and asbestos-containing products) was developed. This will help in improving the situation and realization of multiple SDGs.

Completed activities under this project are as follows:

1. **Awareness-raising through dissemination of IEC Materials (Poster, Fact Sheet and Booklet on Asbestos (A Homeowner & Workers Guideline)),** in Nepali, about the reduction of exposure and best handling practices. Detailed content of a booklet prepared and produced under a WHO-supported project was distributed at a large scale.
2. Wider dissemination of the **National Asbestos Profile 2016** produced by CEPHED (under ABAN, IBAS and Takagi Fund for Citizen Science) occurred during the workshop.
3. **One Regional Workshop on "Effective Implementation of the Asbestos Ban through Awareness and Capacity-Building"** took place in Birgunj on 28th of October 2018. Over 50 participants from different organizations took part in the workshop.

Awareness and Capacity-Building Workshop on Effective Implementation of the Asbestos Ban

Awareness and Capacity Building Workshop on Effective Implementation of Asbestos Ban
क्यान्सरजन्य एसबेस्टस प्रतिबन्ध बारे निर्णयको प्रभावकारी कार्यान्वयन सम्बन्धी कार्यशाला गोष्ठी



Stop Import, Sale, Use, Handle Waste with care and Live without Cancer
28 October 2018, Birgunj, Nepal २०७५ कार्तिक ११ गते, विरगञ्ज, नेपाल



Organized by CEPHED, Kathmandu in coordination with Government of Nepal, Birgunj Metropolitan City, Customs Office, Birgunj and Suryodaya Youth Club, Birgunj and Supported by International Ban Asbestos Secretariat (IBAS) & International POPs Elimination Network (IPEN)

A. Inaugural Session

The Center for Public Health and Environmental Development (CEPHED) in Nepal, with the support of the International POPs Elimination Network (IPEN) and International Ban Asbestos Secretariat (IBAS), successfully organized a day-long Awareness and Capacity-Building Training Workshop on Effective Implementation of the Asbestos Ban in Nepal on October 28, 2018 jointly with the Government of Nepal, Birgunj Metropolitan City, Custom Office of Birgunj and Suryoday Youth Club Birgunj. Taking part were over 60 representatives from different municipalities, including mayors, deputy mayors, health advocates, education specialists, personnel from NGOs, Commerce Officer, Revenue Officer, Customs Officer, laboratory experts, reporters etc. All the participants were given asbestos information material including a poster, fact sheet and booklet which CEPHED produced last year.



Participants at the inaugural session (left to right): Mr. Kameshwor Yadav, Chief of Groundwater Irrigation Office Birgunj; Mr. Gopal Khatri, Chief Custom Officer of Birgunj Customs Office Birgunj; Mr. Chandesh Kurmar Chauhan, Secretary, NGO Coordination Committee, Parsa; Mrs. Santi Karki, Deputy Mayor, Birgunj Metropolitan City (as Chief Guest of the program); Mr. Manoj Nidhi Wagle, Director of Custom Department, Kathmandu; and Mr. Manoj Yadav, Program Officer from Suryodaya Youth Club.

The Deputy Mayor of Birgunj Metropolitan City, Mrs. Santi Karki, our Chief Guest, inaugurated the workshop and praised the efforts of the CEPHED to increase awareness and build the capacity of concerned government agencies, business entrepreneurs and others in order to enhance the effective implementation of the asbestos ban in Nepal.

Another important guest included Chief Customs Officer Mr. Gopal Khatri from the Customs Office in Birgunj, who addressed the workshop and promised to tighten import controls in order to completely stop the import of asbestos and products containing asbestos via customs offices.

Likewise, Chief Ground Water Irrigation Officer Mr. Kameshwor Yadav appreciated the efforts of NGOs like CEPHED, which is well regarded for its research-based campaigns and its assistance to the government in implementing many national policies such as: a ban on the import, sale, distribution and use of asbestos; prohibitions on the use of mercury products; implementation on standards regarding lead paint; and the children's toys standard in Nepal.

Mr. Chandesh Kurmar Chauhan, Secretary, NGO Coordination Committee in Parsa, chaired the inaugural session; addressing the workshop and showing his high commitment towards raising awareness and helping ensure an effective implementation of the asbestos ban in Nepal.

B. Technical Session

The first technical session was started by Mr. Ram Charitra Sah, Executive Director and Environment Scientist at CEPHED, and shed light on the importance and objective of the workshop. He made a technical paper presentation entitled, "National Asbestos Profile, status of implementation of Nepal ban asbestos prohibitions on the import, sale, distribution and use

of asbestos & prevention, control measures and initiatives to reduce the impact of asbestos exposures on human health and the environment.” In addition, he also discussed the hazards posed by lead in paint, chemicals in childrens’ toys, mercury in products used for health care and dentistry, as well as chemical contamination of cosmetics.

He briefly introduced the CEPHED and its campaign for the asbestos ban in Nepal. He also presented information on asbestos, its types, its uses, health impacts, and the status of asbestos import levels. He highlighted the need for even stronger and more coordinated efforts to reduce asbestos imports to zero through tightening custom controls, increased market monitoring, raising public awareness and building capacity.



Mr Ram Charitra Sah presenting information about the status of asbestos imports after the national ban

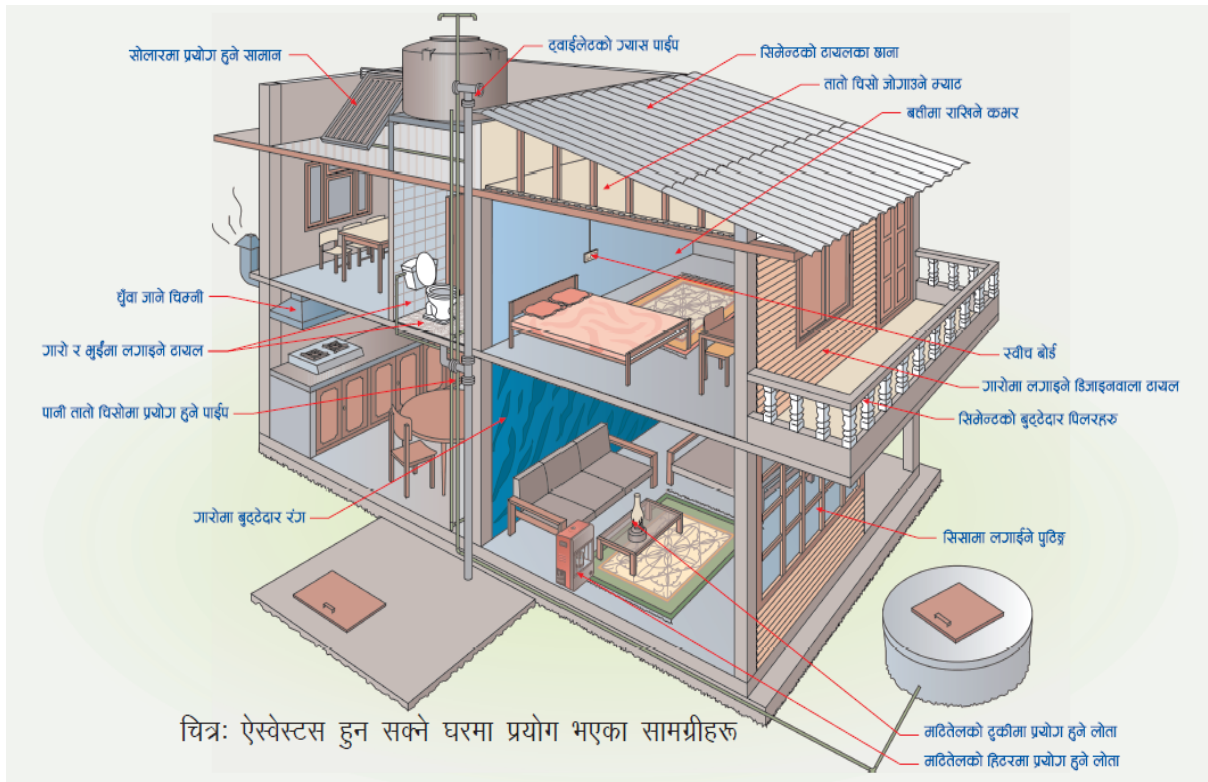
He demonstrated the possible places of use of asbestos in a house. This includes in roofs, ceilings, decorative tiles, solar panels, vent pipes, door and window sealant, switch boards, bulbs covers, health and cool water supply systems, decorative paints, light sources, and heaters.

He then briefly illustrated the different form of uses of asbestos in different parts of the country, which are now becoming sources of asbestos exposure after banning the asbestos import, sale, distribute and uses in Nepal.

He also talked about the impact of asbestos in detail and illustrated how mesothelioma can happen to the human after coming into contact with asbestos. He demonstrated the health impacts of asbestos, including mesothelioma as well as other cancers of the esophagus, larynx, oral cavity, stomach, colon and kidney. He explained how asbestos can also cause respiratory diseases: breathable fibers are deposited in the alveoli (the small air sacs in the lungs), fibers cause damage to respiratory system; and fibers may also travel to the pleura, the membrane lining the lungs.

He pointed out the different signs and symptoms of asbestos exposure.

He then briefly talked about the Government of Nepal, Ministry of Forest and Environment-MOFE (then called MOPE) banning decision through a gazette notification, a case filed against the government’s asbestos banning decision, and summarised the positive verdicts from the Supreme Court of Nepal.



Exposure from Roofing for Houses and Schools



Asbestos use in Rural Nepal



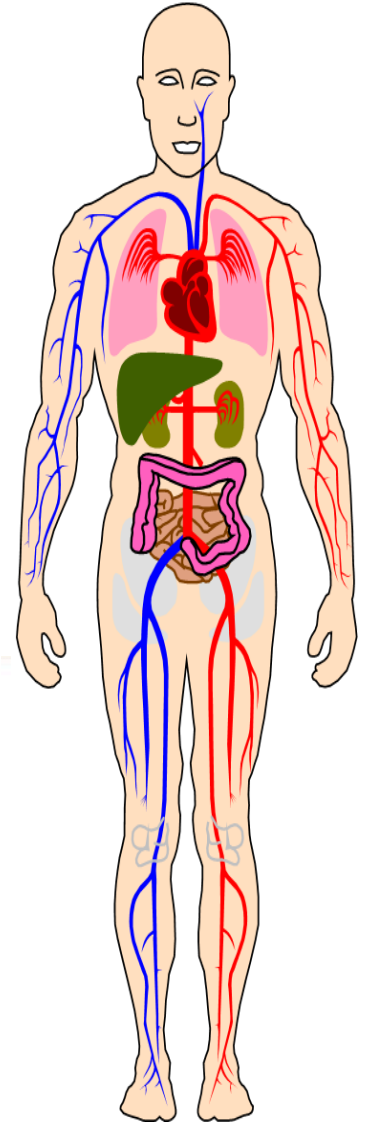
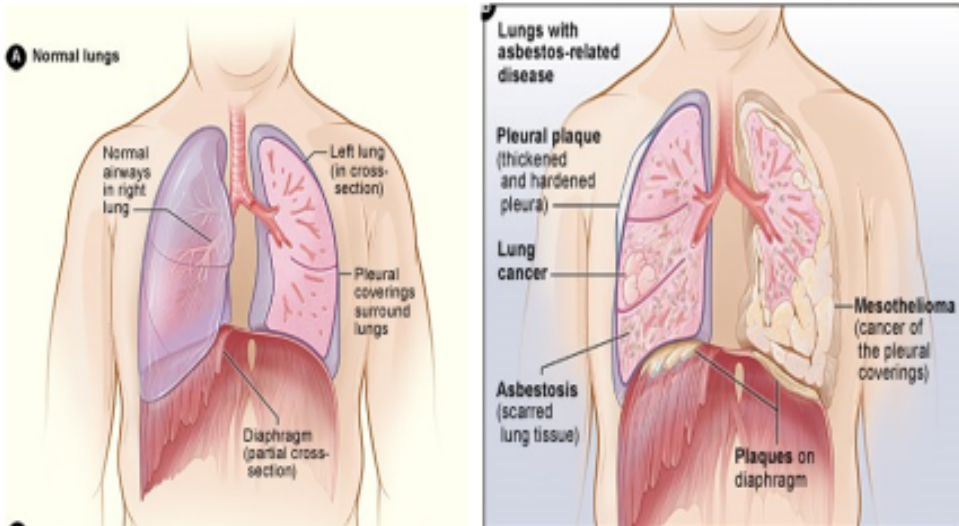
Children School with asbestos sheet roofing



Asbestos use in Rural Nepal



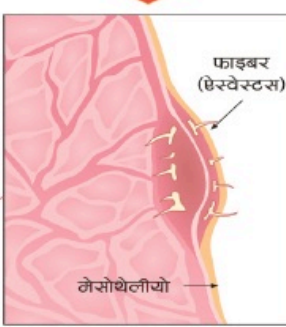
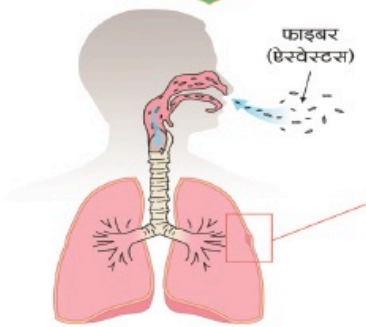
ARD - Lungs



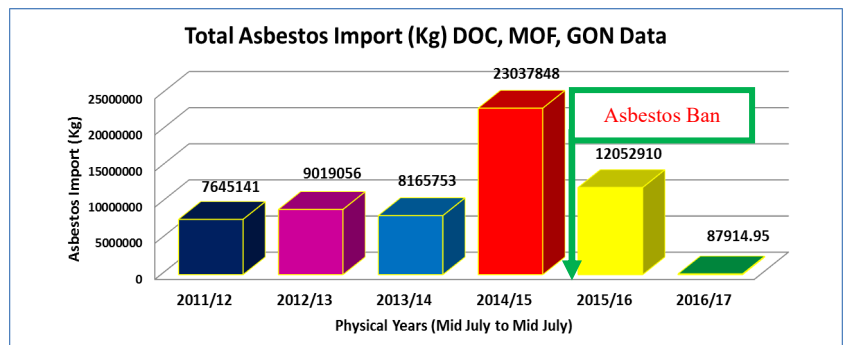
ऐस्बेस्टसको रेसा श्वासप्रश्वासको माध्यमबाट सर्छ ।

ऐस्बेस्टसको रेसा फोक्सोमा अड्कीएर फोक्सोको तन्तुलाई असर गर्छ ।

अड्किएको ऐस्बेस्टसको तन्तुबाट मेसोथेलियोमा क्यान्सरको विकास हुन्छ ।



He presented the status of post-ban import scenarios as the part of the National Asbestos Profile, along with the related CEPHED activities.



ASBESTOS BAN NOTICE IN NEPALI GAZETTE

Government of Nepal as per the provision of Environment Protection Act 1997, Art. 7 (3) banned the import, sale, distribution and use of Asbestos, Corrugated, Non Corrugated sheet, Tiles, Insulators etc., all asbestos and asbestos containing materials except asbestos lining of Brake Shoe & Clutch plate by notification published in Nepal Gazette (Khand 64, No. 30, Part 5, Notice no. 4). Banning is effective from 20th June 2015.

The Supreme Court of Nepal Judgment on the Asbestos Case

The final decision of the Supreme Court of Nepal on the Asbestos Case filed by a business entrepreneur was in the favor of government's decision to ban all forms of asbestos in Nepal.

Summary of the court case and decision is as follows:

1. The government of Nepal, based on the research-based advocacy campaign of CEPHED, banned the import, sale, distribution and uses of all forms of asbestos - except the lining of brake shoes and clutch plates - on 22 December 2014, with the effective date 181 days after gazette notification. This was started on 20th June 2015 exactly.
2. Just three days prior to the effective date of the asbestos ban decision (i.e. On June 17, 2015), an entrepreneur name Mr. Amit Kumar Gupta who imports and manufactures asbestos-based construction materials (including asbestos roofing sheets) filed a petition in the Supreme Court of Nepal against the government demanding that their decision to ban asbestos be quashed.
3. CEPHED, along with others, prepared and appeared in the Supreme Court of Nepal, and made all the relevant documents available to the group of lawyers to make the necessary arguments against the business community.
4. After several rounds of hearings in the court, on February 10, 2018, a joint bench of Honorable Chief Justice Gopal Prajuli and Honorable Justice Tank Bahadur Moktan gave the final verdicts, dismissing the writ petition filled by the business community and issuing a directive order to the Government of Nepal to carry out a comprehensive study and inform the public about the same.

The two important points of the final judgment are as follows:

- (a). Dismissing the writ filed by the business entrepreneur reinforced the government of Nepal's decision of banning the import, sale, distribution and uses of asbestos in Nepal.
- (b). The Court also issued a directive order in the name of government of Nepal to make a comprehensive study on the types of asbestos that may and /or may not be recommended for use, and possibilities on safer alternatives to asbestos. The government was directed also to duly inform the public in a clear manner about the study findings on asbestos under the social responsibility.

Finally, Mr. Sah shed light on the three important post-ban issues associated with asbestos and called for action from all concerned government agencies and stakeholders regarding:

- effective implementation of the asbestos ban decision and reducing import levels to ZERO;
- reduction of health and environmental damage from existing uses of asbestos and asbestos-containing products by minimizing every possible human exposure; and
- implementation of environmental policies to ensure sound management of asbestos-containing wastes that are going to be generated at a massive scale in the near future from the disposal of toxic products.

He concluded his presentation by summarising the important facts and figures from the detailed National Asbestos Profile of Nepal, including current status of imports, uses and health issues, as well as the on-going campaign. He recommended the following immediate actions from all concerned:

- a) Effective implantation of the asbestos ban decision to achieve ZERO IMPORTS as per Gazette Notice.
- b) Regular market monitoring and surveillance, and cessation of the existing asbestos in the market and management of them in environmentally sound manner.
- c) Air monitoring for asbestos exposure minimization through fixing exposure limits.
- d) Reduction of post-ban exposures from existing uses of asbestos and asbestos-containing products.
- e) Environmentally sound management of asbestos-containing wastes.
- f) Incorporation of asbestos ban in Building Codes and Green Building Guideline.
- g) Development of Guideline & Policy for Disposal and Sanitary Landfill for Asbestos Waste.
- h) Enactment of exposure limits of asbestos for workers.
- i) Immediate ratification of the ILO Asbestos Convention 162.
- j) Regular awareness-raising and capacity-building of the people and concerned agencies.
- k) Certifying and Licensing of trained manpower and contractors for asbestos handlings.
- l) Technical, institutional and legislative capacity-buildings of the nation.



Dr. Arbind Pathak, presenting the Asbestos testing method developed in Nepal

Dr. Arbind Pathak, Assistant Professor at Trichnadra Multiple Campus, Kathmandu, presented a paper on “Development & Demonstration of Asbestos Testing Method and its

Uses.” The testing method has been domestically developed by the Department of Customs after the banning of asbestos in Nepal to meet an urgent need to have testing facilities in place to check import consignments and stop the import of asbestos and asbestos-containing products. He fully explained the development of the testing facilities and testing procedure; he also discussed how to use these protocols. Dr. Pathak explained the precautions needed to reduce exposures during testing of the asbestos samples so as to avoid occupational exposure to laboratory personnel.

Testing method development

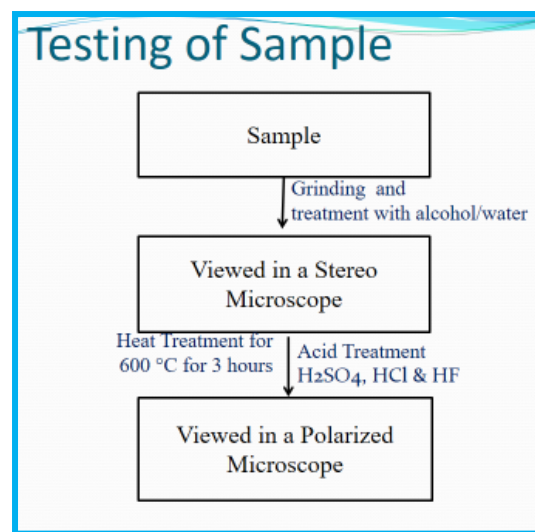
- Laboratory developed method
- Based on scientific facts & physicochemical properties
- Involves macroscopic, microscopic, chemical and thermal treatment

Disposal and handling of test samples should be done as follows:

- Grinded and tested sample disposed after boiling with acid
- Remaining part of positive sample kept in store labeled "danger"
- Use of mask, goggles, gloves is mandatory
- At least two chemists should be present in the lab while testing an asbestos sample

Effect of asbestos ban and customs work

- Central Customs Lab (CCL) became the 1st lab in Nepal testing asbestos in our own capacity.
- More than seven cargos /goods have been seized after the laboratory report.
- Two businessmen and one religious organization rejected products before importing [we voluntarily provide test report on pre-arrival basis]
- No more asbestos import data in the customs database.





Mr. Manoj Nidhi Wagle presenting about the status of imports and customs control of banned asbestos, challenges, opportunities and approaches

Mr. Manoj Nidhi Wagle, Senior Chemist and Director at Central Custom Labs, Department of Customs, Kathmandu made a presentation on “The Status of Import and Customs Control of Banned Asbestos, Challenges, Opportunities and Approaches,” in which he considered the following issues and enlightened all the participants, especially the Custom Officers from the border area, about: introduction of the asbestos ban regulation; asbestos import and consumption data (by sharing the data as well as briefly talking about the seizing of the known asbestos consignment as shown in the figure below); causes of noncompliance; at-risk occupations; types of asbestos-containing products; challenges being faced and opportunities; and action taken by the customs department and custom offices towards regulating the importation of these products to Nepal.

The fact that current data clearly shows a heavy reduction of importation of asbestos and asbestos-containing products through customs is really a remarkable achievement.

HS Code	2071/72	2072/73	2073/74	74/75	75/76
252410	130	0	0	0	0.04
252490	547	229	6 Seized one	0.4 Seized	
681140	8090	2286	3	7 consignme nt more than 10 tons seized	
681280	9	2	1		
681291	10	4	4		
681292	24	24	4		
681293	207	15	10		
681299	50	42	26		

Cause of noncompliance

- ▶ Not aware of Standard
- ▶ No market monitoring by authorities
- ▶ No effective communication about safe alternatives
- ▶ Customs control not being effective
- ▶ Less supervision
- ▶ No ban in exporting countries
- ▶ All are importers on the open market

Action taken by Department of Customs (DOC)

- ▶ Frequent communication with officers based on their data
- ▶ Mandatory testing for suspected products
- ▶ Seizure of 2 +6 tones last year
- ▶ Written order to Customs
- ▶ No clearance of asbestos-containing substance in the name of so-called essential industries products
- ▶ Testing is only limited to the samples received

Challenges

- ▶ Shifting to expensive products
- ▶ Behavioral change
 - Private sector
 - Government sector, including Customs
- ▶ Call back from market
- ▶ Waste management
- ▶ Service sector awareness

Opportunities

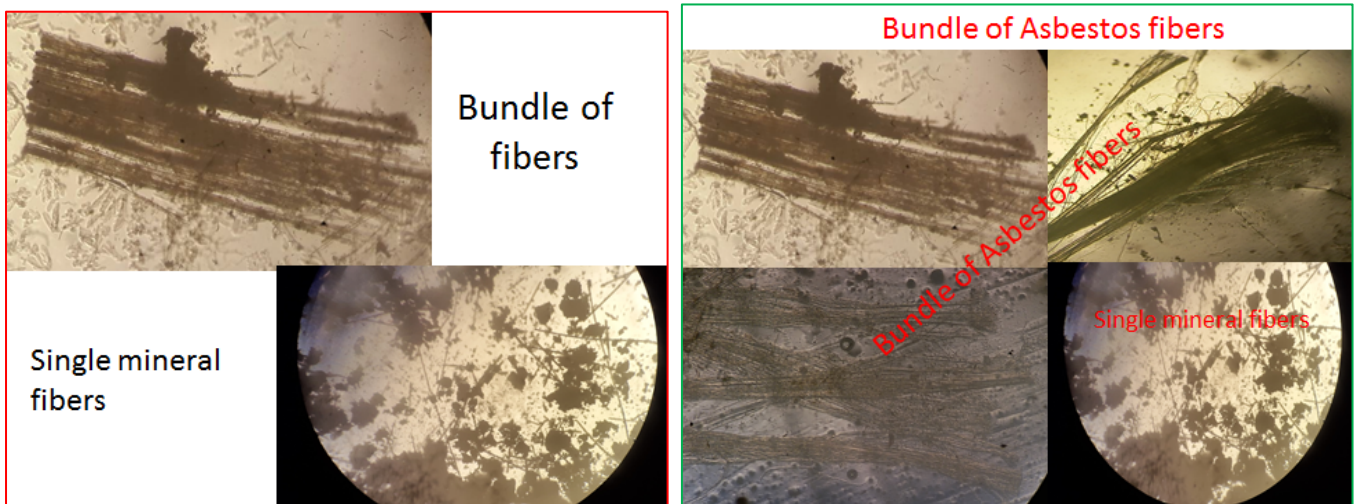
- ▶ To develop market surveillance mechanism
- ▶ To communicate about safer alternatives among stockholders
- ▶ Training and / or awareness-raising of Customs officers
- ▶ Development of test and identification capacity of asbestos-containing products
- ▶ Disseminating knowledge and skills
- ▶ Saving Health

Demonstration of Asbestos Sampling and Testing method

In the second part of his presentation, he also demonstrated the testing methods (as well as testing products) the Department of Customs have done over the years after the asbestos ban came into effect.

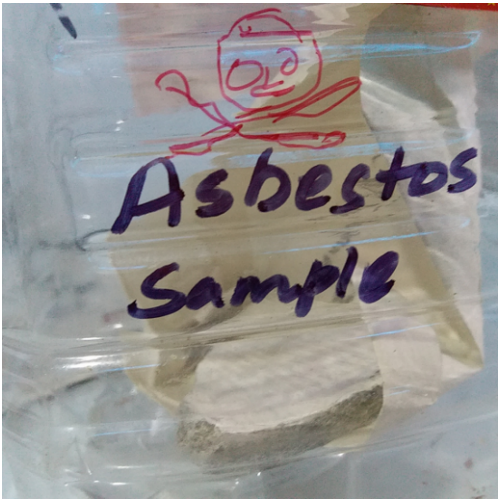
This session was comprised of a short power point presentation followed by the samples and illustration demonstrations and explanations by a group of three experts from the Department of Customs.

In this section Mr. Manoj Nidhi Wagle briefly presented why an asbestos test is required in CCL (Central Custom Laboratory), the test method, some photographs and its limitations. CCL needed to carry out testing because asbestos and asbestos-containing materials are banned from import, yet there isn't any dedicated laboratory to test Asbestos yet, nor any private or government laboratory ready to receive and test the suspected samples. Customs is also dedicated to control the transboundary movement of substances harmful to health and environment, so customs officers send suspected samples to CCL.



He then demonstrated test sample procedure and required materials, including full protective gear. The sample is observed under a high magnification microscope (usually 40 and 100 time magnification) for preliminary examination. Regarding the use of a polarized light microscope: multiple fibres nearly parallel to each other or bundles of fibre with matching optical behaviour confirms asbestos. If no fibre is seen, asbestos may absent, and the Customs office carries out duplicate tests for conformation.

He then demonstrated the asbestos samples tested under the polarized light microscope.



He also explained the limitation of this home-grown testing method and that he felt the need for improvement and more and more validations. For example, fibres less than 0.1 mm in length and asbestos presence less than 1% or not in a bundle may lead to false negative results. Minerals or organic fibre as stable as asbestos may also lead to a false positive.



Asbestos in Lab



FIG. 1. Asbestos braided and woven packings—lime, top; tar, middle; asbestos, bottom. (From *Asbestos*, 1963, p. 183.)



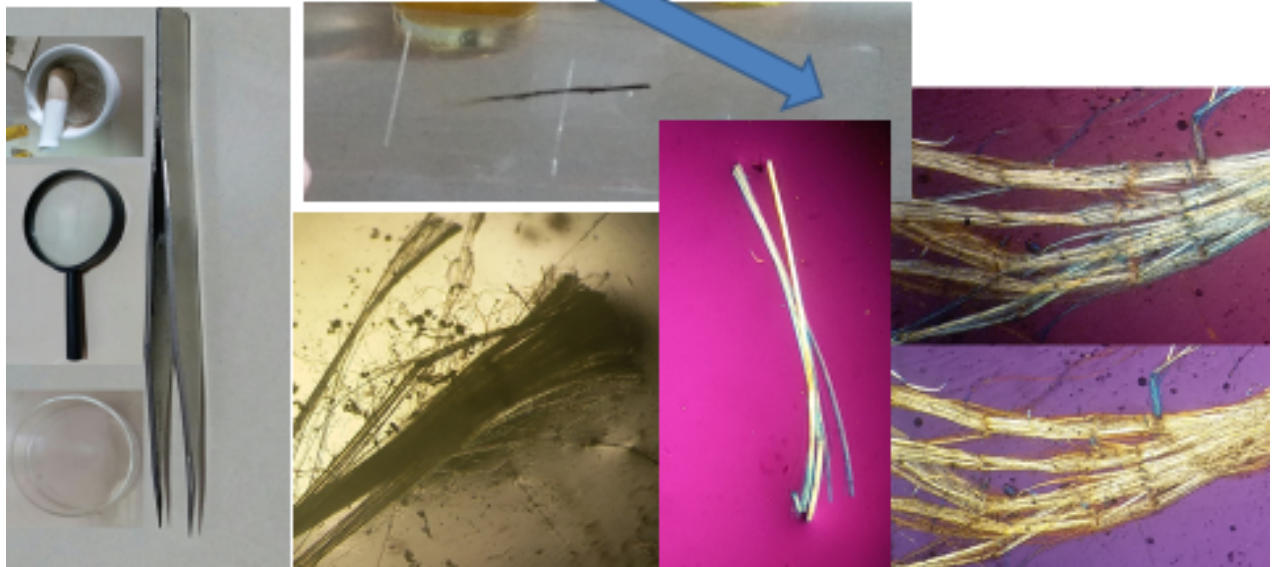
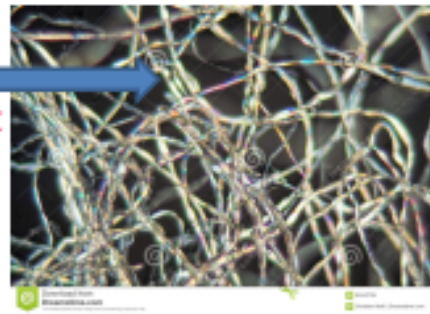
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Asbestos under light microscope

Cotton under light microscope



Group picture of participants of Awareness and Capacity Building Workshop on Effective Implementation of the Asbestos Ban in Nepal, held in Birgunj on 28th October 2018

Dissemination of IEC Materials (Poster, Fact Sheet and Booklet on Asbestos in Nepali)

Under the project supported by Takagi Fund for Citizen Science, Asia Ban Asbestos Network (ABAN) and the International Ban Asbestos Secretariat (IBAS) in the year 2016, and with the continued support of the World Health Organization (WHO) and IBAS, CEPHED has released important materials, including a poster (“Remove Asbestos, Eliminate Cancer”), Asbestos Fact Sheet and Asbestos Booklets (House Owner’s and Worker’s Guideline).

The content in the **Asbestos Poster** is as follows.

- Theme of the Poster: Remove Asbestos & Eliminate Cancer
- Asbestos-containing products possibly used in a typical house (pictorial representation)
- Facts about asbestos (know asbestos)
- How to prevent exposure to asbestos
- Health Impacts and Asbestos-Related Diseases (ARDs)
- How to be safe from Asbestos-Related Diseases (ARDs)
-

The content in the **Fact Sheet on Asbestos** is as follows:

- What is asbestos and types of asbestos
- Where has asbestos been used?
- Who are at risk from asbestos?
- How does asbestos enter in our bodies, how does asbestos enters a worker’s body?
- Symptoms of ARDs
- Compounding factors of aggravating ARD
- How does asbestos affect our bodies?
- Tools of assessing ARD
- How does asbestos affect the environment?
- Occupational Safety and Health Administrations (OSHA) Standard on Asbestos
- Safety factors included in the OSHA Standards
- How to save ourselves from ARDs?
- Methods of preventing exposure to asbestos
- Disposal of asbestos-containing products
- Rights of workers working with asbestos
- Stakeholder/institutional response towards solving asbestos-related problems
 - Government of Nepal responses
 - Department of Customs Responses
 - World Health Organization Responses
 - International Responses
 - International banning of Asbestos
 - National Capacity of Preventions and Control of Cancer Diseases
 - CEPHED Response and Initiatives

The content in the **Asbestos Booklet (A Home Owner’s and Worker's Guide)** is as follows:

- What is asbestos?
- Sources of asbestos

- Uses of asbestos
- Impacts of asbestos on public health and environment
- Identification/examination of asbestos (what to look for)
- Sampling of asbestos (how to take a sample)
- Where to test (NAST and Department of Customs)?
- How much does the testing costs?
- What to do if you have asbestos?
- Don't do repair and removal works of asbestos yourself
- Hiring the right contractors and entrepreneur to do it for you
- What to do if asbestos has been released in your home?
- How to repair it?
- What if you are remodeling your home?
- Disposal requirements of asbestos
- Safe disposal procedures
- Personal protective gear for workers and waste handlers
- Handling of asbestos
- Asbestos-related national and international laws, policy, guidelines, conventions
- Health checkup procedures and places
- Preventive measures for workers to reduce exposure
- Prevention of ARDs
- Any other related issues (health and environment)
- Gazette Notification of Government of Nepal Banning Asbestos
- Initiatives required for effective implementation of the Asbestos Ban in Nepal
- Additional references related to asbestos to know more
- CEPHED brief description

The Booklet has about 20 pictorial illustrations and graphics have been included. A well-known artist was contracted out to produce a dozen fantastic drawings illustrating asbestos, uses, sources, asbestos-related diseases, sampling and handling technology, disposal methods, etc. These were included in the fact sheet, posters and especially in the booklets.



ऐस्बेस्टस

जानकारी पत्र १



ऐस्बेस्टस भनेको के हो ?

ऐस्बेस्टस एक प्रकारको प्राकृतिक रूपमा पाइने खनिज पदार्थ हो । यो ६ प्रकारका: एम्ब्रोनालाईट, एम्सोलाईट, ऐनयोफिलाईट, कार्बोसोलाईट, क्रोसिडोलाईट र ट्रेमोलाईट हुन्छन् । रासायनिक संरचनाको आधारमा ऐस्बेस्टस खनिजरू सिलिकेट यौगिकबाट बनेको हुन्छ । जर्वात यो सिलिकन र जर्निसजन मिलेर बनेको हुन्छ । रेशाहरू बलिया एवं ताप, आगो, खिया र रासायन प्रतिरोधी हुनुको साथै विद्युतिय कुचालक पनि हुन्छ । यी नै गुणहरूको कारण ऐस्बेस्टसको उचोगहरू, विभिन्न भवन निर्माण सामाग्री र सवारी साधनहरूमा व्यापक प्रयोग भएको पाईन्छ । ऐस्बेस्टसका रेशालाई ठामी नाजो आँखाले हेर्न नसक्ने भएको कारण कामदार, मजदुर र ऐस्बेस्टसले छएको घरमा बस्ने मानिसहरू यसको बढ्दो जोखिममा हुन्छ । ऐस्बेस्टसलाई तराईमा ऐल्बेस्टर पनि भन्ने गर्दछ ।

ऐस्बेस्टस खनिजका प्रकारहरू

सरोप्टाईन ऐस्बेस्टस (मुन सक्ने पत्थो र पुमावरो रेशा भएको)	एम्ब्रोनाल ऐस्बेस्टस (सिपा, मुई पत्थो तुल्य दुब्ल सक्ने रेशाहरू)
कार्बोसोलाईट	एम्ब्रोनालाईट, ट्रेमोलाईट, ऐनयोफिलाईट, क्रोसिडोलाईट र एम्सोलाईट

स्रोत : <https://www.cancer.gov/about-cancer/causes-prevention/risk/substances/asbestos/asbestos-fact-sheet>



ऐस्बेस्टसको रेशाहरू

ऐस्बेस्टस सम्बन्धी जानकारी पुस्तिका घरधनी र कामदारका लागि मार्गदर्शन

ASBESTOS BOOKLET (A Home Owner's and Worker's Guide)



राम चरित्र साह



Press Release

A press release was prepared and made available to all journalists and media houses through direct distribution during the workshop and / or by sending it through mail.

Media Coverage

More than a half dozen media stories (example below) were published about the asbestos issues and there was also large coverage from radio and TV as well as online media.

