



# Association for Humanitarian Development (AHD)

**Association for Humanitarian Development (AHD) is a social community based organization established 2001 – 2002 & registered under the societies Registration Act: XXI of 1860 on 17 May 2003**

**The main objective of the AHD is to work for the peace, justice, harmony and equality for all**





# Association for Humanitarian Development (AHD)

## AHD Programs & Projects

Association for Humanitarian Development, a not for profit organization, working in Sindh Pakistan since 2003-2004 and promoting community development projects for the uplift of the rural poor communities residing in rural, far and scattered areas of Sindh Pakistan. AHD working for safe drinking water, health, women empowerment, education, agriculture & environment, relief & rehabilitation & youth related activities in rural areas of Sindh Pakistan.





## AHD Success 2007-2014

- Since 2007 AHD successfully reached more than 27,000 families with provision of safe drinking water Nadi filter units at their household level & about 216,000 individuals have access to safe and clean drinking water. Supported by Oxfam GB, Misereor Germany, Help Alliance, Lufthansa Airline, WHO Pakistan, UNEP / APFED Thailand, Global Giving USA and CDP department Govt. of Sindh Pakistan.
- NEXT TARGET: 50,000 families till 2018.
- AHD WINS the Energy Globe Award 2014 in water sector for Pakistan <http://www.energyglobe.info/pakistan2014?cl=english>,





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**Safe Drinking Water Scarcity in Pakistan:** about 80% rural and 60% urban communities facing unavailability of safe and clean drinking water in all over Pakistan.





## Contaminated water multiplying the miseries of already poverty stricken people of Pakistan





## Introducing Bio-Sand Nadi Filter Simple and indigenous solution for clean water!!



**Association for Humanitarian Development (AHD)**

**1. Make a Hole in Nadi**

**2. Take 40 kg sand and Pass it from three different size of nets**

**3. buy three different size nets and separate big stones first**

**4. Wash sand and stones with water**

**5. Take a 2.5 feet Plastic pipe and fit it in the nadi with Cement put a big layer of big stones around the pipe**

**6. Put another layer of small stones on to the big stones**

**7. Again put a layer of bean size stones on to the small stones**

**8. Now put a small bean size stones on to the bean size stones**

**9. Take sand and sieve by medium size net and wash it and finally put a thin layer of this washed sand on Stones**

**10. Take a 3 inch big Nail and turn it**

**11. Made a small hole in the bottom Side of Matka**

**12. Put matka on Nadi and tie it rope**

**13. Nadi in which you want to Store water cover its mouth and cover pipes mouth with clean and dry cloth.**

**14. In first three weeks the good bacteria will increase as much, that they will eat all the bad bacteria, that's why water will come out safe & clean.**

**Follow the Steps of this Chart or Contact AHD +922-2933236**

**For the water filter training**      **For the copies of chart (full of pictures)**

**For the method of making filter or training staff**      **For having material of making Nadi**

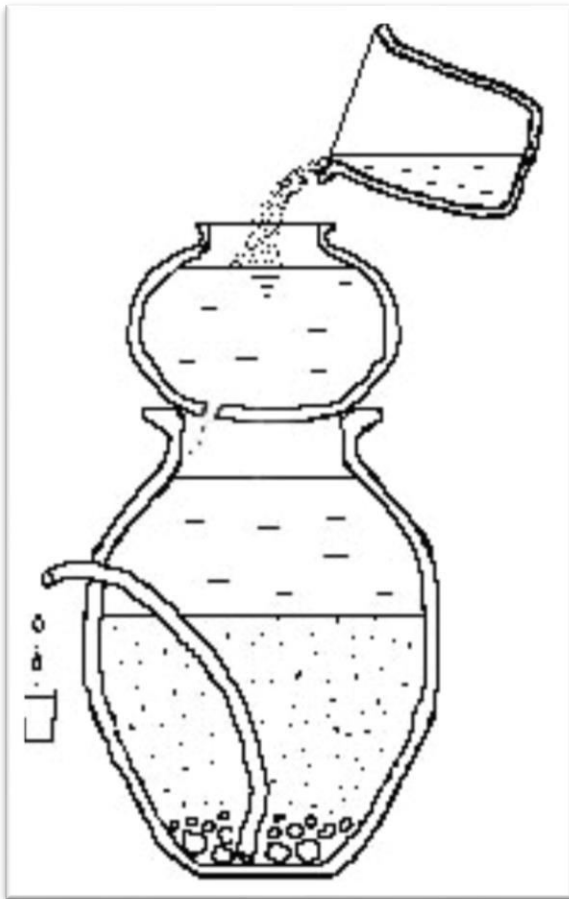
**Association for Humanitarian Development (AHD)**

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## An easily made, simple & indigenous Water Filter



*The design of Nadi filter unit is very easy, simple and adoptable. It's material available at local level / in villagers and materials used in this filter are widely and easily available in local market. Means the Nadi filter technology is 100% local based technology which can be promoted at any where in Pakistan on large scale.*



## So how does rock and sand filter the water?

It's all about biology. There are “good” microbes and “bad” microbes. The bad microbes are what cause disease and bacteria. This filter works by giving the good microbes a place where they can set up a home and reproduce; the sand. Because the sand has so much surface area in all the little pieces it gives a lot of room for the good microbes to hold onto and grow. As time goes on the microbes continue to multiply on the sand. After about one week there are enough good microbes eating the bad microbes for the water to be considered very clean and good to drink. Then all you have to do is add dirty water to give the good microbes a supply of food (the bad microbes), and what comes out is clean water.



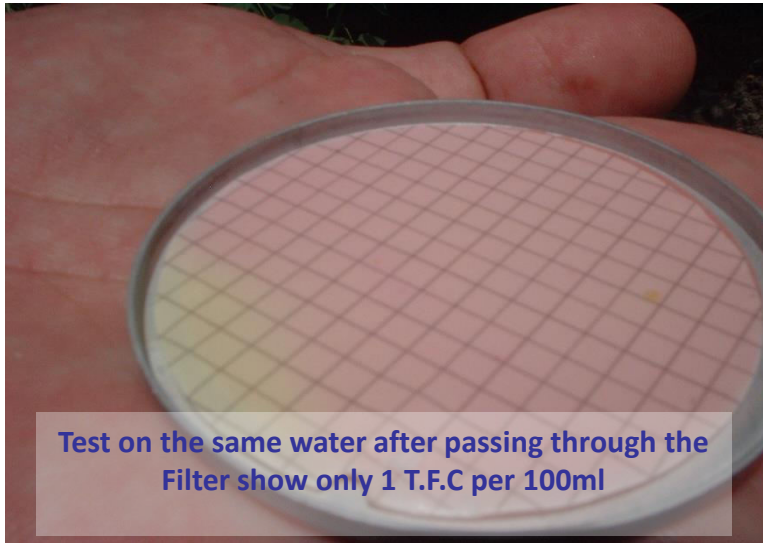
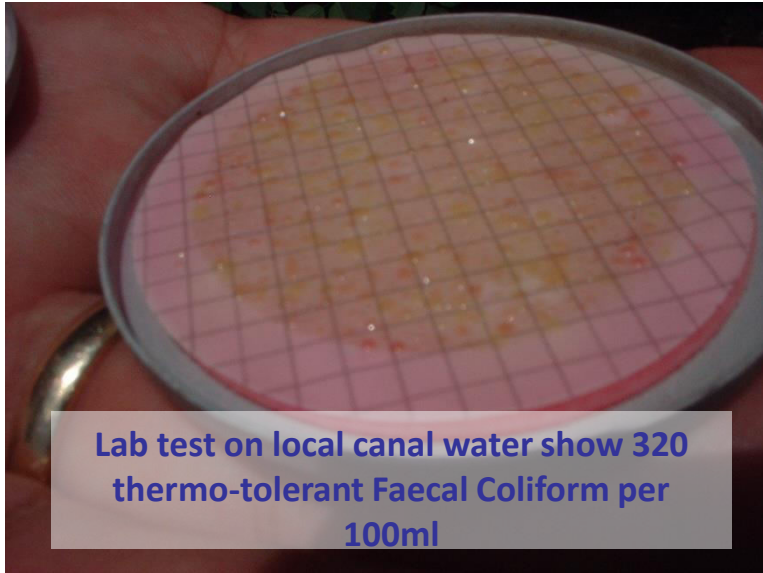




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**AHD targeting safe drinking Nadi filter water units for 50,000 Families in Pakistan till 2018**





## Performance of Bio-Sand Nadi Filters. Tests conducted at AHD + Oxfam GB Lab

<b>Parameter of water quality</b>	Purification effect of slow sand filtration
<b>Colour</b>	70% to 100% reduction
<b>Turbidity</b>	Turbidity is generally reduced to less than 1 NTU
<b>Faecal Coliforms</b>	95% to 100%, and often 99% to 100%, reduction in the level of faecal Coliforms
<b>Cercariae</b>	Virtual removal of cercariae of schistosomes, cysts and ova
<b>Viruses</b>	Virtually complete removal
<b>Organic matter</b>	60% to 75% reduction in COD
<b>Iron and manganese</b>	Largely removed
<b>Heavy metals</b>	30% to 95% reduction



## MAP showing areas covered with provision of Nadi filter Units



## Cost of making a Nadi Filter in US \$

32- 34 inch Nadi	5 \$ - 5 \$
*20 inch Nadi	4 \$ - 5 \$
Mutca	1 \$ - 2 \$
Sand	1 \$ - 2 \$
Pipe	2 \$ - 3 \$
Cement	1 \$ - 2 \$
String	1 \$ - 2 \$
*Bricks	1 \$ - 2 \$

Total US \$ - 16 – 21 only

Typically for 1 Unit US \$ 16





## ECONOMIC, SOCIAL AND ENVIRONMENTAL BENEFITS

**AHD Nadi filter have a multiple benefits for the poor communities, once install Nadi filter unit at their household level than:**

- ❖ 1 one Nadi filter unit can save 5 to 10 US \$ per month of a family
- ❖ save cost of travel and transportation as canal water or ground water can be filtered for drinking purposes
- ❖ Women work load reduced to fetch drinking water from 1-2 km away from their house
- ❖ women and children health improved and about US \$ 10 to 20 saved on monthly basis for 1 family (saved from water borne diseases)
- ❖ Energy saving as local material used to prepare Nadi filter unit
- ❖ from 1 Nadi filter unit 20 to 30 people can have safe and clean drinking water ....positive change in society
- ❖ Nadi filter unit installation also bring peace in different villages sharing technology will be the source of peace



# socio-economic aspects of AHD Nadi water filters in Pakistan

**One billion people lack safe drinking water.** Every day they risk their lives and health by drinking from contaminated sources: they are missing out on a basic human right. Here the AHD Nadi filter can make a difference, providing safe drinking water, right where it's needed most: at household level, because it effectively purifies contaminated water.

**Cheap and simple, yet effective.** Dedicated to spreading knowledge of this unique technology, we believe this filter can make a difference, save lives in just US \$ 10 for 12 months or one year, where other technology fails or is too costly.





# Thank You!

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Association for Humanitarian Development AHD

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