

Economics of IPR
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Module - 03
Lecture – 01
Issues in Contemporary Patents

As a part of week 3 lecture, we are going to discussing detail some of the contemporary issues related to intellectual property rights. So till now we have seen that how intellectual property rights are being globalized today, it has the global importance, multinational companies are trying their best to get certain rights, certain intellectual property rights because such rights are giving them monopoly power in the world. And we have seen that different types of intellectual property rights are available and all these rights are having different nature of ownership.

They all are really contributing different types of economic sentiment to the owners and to the consumers. After having such discussion now we are trying to explore the current issues and contemporary intellectual property rights and then this series, this particular lecture is talking about, discussing about the contemporary issues in patents.

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So to begin with we will first try to give you the brief outline of this lecture we will try to discuss the background of patent. Again discussing the economics of patent it is indeed

important to link the patents with genetic resources, the piracy which is going on the patents and GM crops, GM food, patents and biotechnology and one of the most important and challenging issue for a country today which is pharmaceutical for the majority of the publication in developing and list develop country and then will try to conclude.

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THE BACKGROUND

- Patents system is associated with mainly two distinct risks: internal and external
- Fair operation of the patents system is the internal challenge
- On the other side, external threat is the execution of the patent system at the policy level, as well as the socio-economic impact associated with patents
- The patent system especially in the developing world, is perceived by mistrust, doubt and unrest
- It has generated heated public debate world wide

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As we have discussed in detail that patent system is the system which gives you, which gets the form a type of ownership, which makes you very distinct and exclusive in the sense of marketing and there are two distinct risks internal and external associated with the patent system. So fair operation of patent system is the internal challenge for the economy, on the other side external threat is the execution of the patent system at the policy level, as well as the socio economic impact association associated with the patent system.

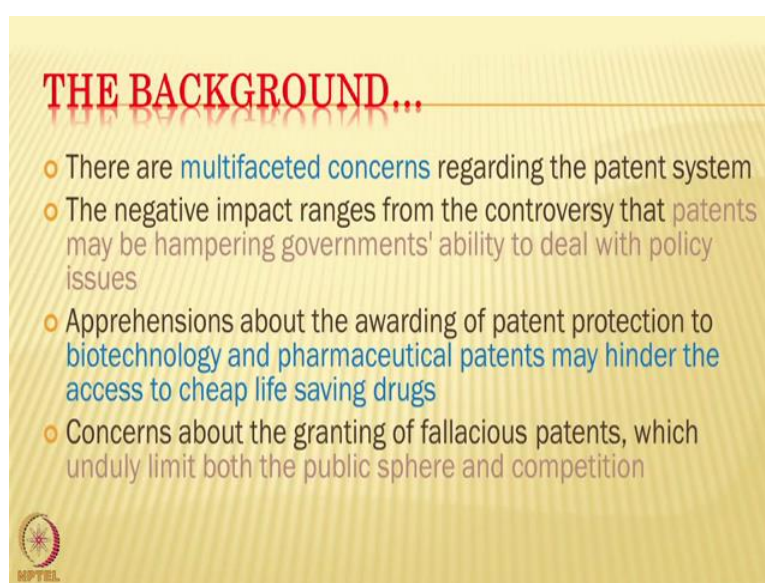
So, a patent system especially in developing world is perceived by mistrust doubt and unrest today and that is why it is called doubt and mistrust because majority of the farmers majority of the of the people associated with the cultivation, there having this fear that whether the new patent system is going to really provide them, any sense of security in the life or not because there is very slow occupational structure change among the farmers in specially in developing country and is stable of country and since majority

of the population is still busy with the forming and there is intern other lively hood and other parallel source of sub systems for them survival is really difficult for them.

So in that this patent system is becoming a challenging system and lots of mistrust doubts and under stage is available, people have protesting against such system in many developing country and again the health is one of the major issue public health is another issue and due to the increase of the digit its and the new types of digit its which is one the way the R and D and the innovations in the pharmaceutical industry is providing a new challenge for the mass population. Challenge in the since start the new medicines are really costly and whether these low income group countries are in the position to and the middle income group countries are in the position to really by those products are not.


So, due to these facts and with this background we will try to explode the different issues associated with the patents system. So apart from that, we are also finding that there are multi phase, multi facet corners recording the patent system. The negative impact ranger from the controversy that patents may be hampering the government stability to deal with the possible should and appliances about the awarding of patent protection to biotechnology patents, may also hinder the access to the cheap life saving drugs and concerns are also about granting of falls patents which unduly limit both the public sphere and competition.

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THE BACKGROUND...


- There are **multifaceted concerns** regarding the patent system
- The negative impact ranges from the controversy that patents may be hampering governments' ability to deal with policy issues
- Apprehensions about the awarding of patent protection to **biotechnology and pharmaceutical patents may hinder the access to cheap life saving drugs**
- Concerns about the granting of fallacious patents, which unduly limit both the public sphere and competition



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GENETIC RESOURCES

- ✗ Genetic Resources (GRs) originate from nature and thus can not be treated as the creations of human intellect, so they can not be straightly protected by IPRs
- ✗ Though, there are intellectual property concerns coupled with GRs
- ✗ 'Plant breeders' rights' is the channel through which these plant varieties are developed using GRs are protected and are also patentable




So one of the issues which is related to the patent today is the Genetic Resources. Genetic Resources are originating from the nature and thus cannot treat as the creation of human intellect.

So, they cannot be straightly protected by the intellectual property rights. It is true that there are intellectual property concerns related with the genetic resources today and plant breeders rights is the channel through which these plant varieties are developed using genetically resource, resources products and also which is patentable.

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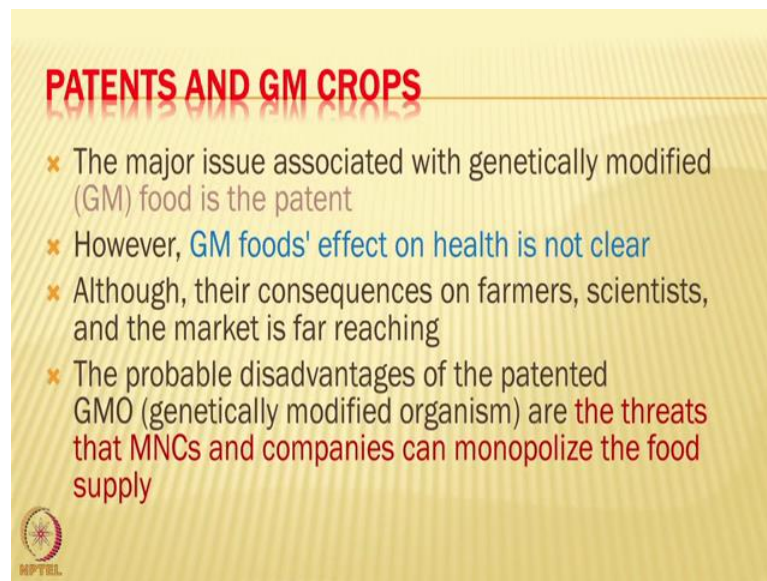
GRS CONT..

- ✗ Granting of unfairly patent protection should be prevented which do not fulfill the prerequisite of originality and innovativeness for those inventions based on or developed using GRs
- ✗ Unauthorized use should also be prevented




So granting of unfairly patent protection should be prevented which do not fulfill the prerequisites of originality and innovations of those inventions based on or developed using the genetic resources. So unauthorized use should also be prevented especially in genetic sector and we find that there are large number of genetically modified foods, change patented this the major issue associated with GM food or is the patent because GM foods' effect on health is not clear, but it is true that their consequences on form of scientist and the market is far reaching.

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PATENTS AND GM CROPS

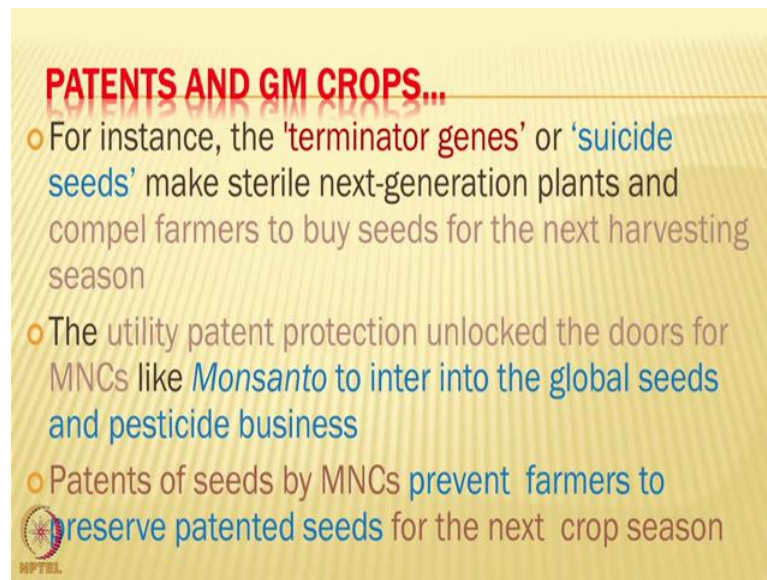
- ✗ The major issue associated with genetically modified (GM) food is the patent
- ✗ However, GM foods' effect on health is not clear
- ✗ Although, their consequences on farmers, scientists, and the market is far reaching
- ✗ The probable disadvantages of the patented GMO (genetically modified organism) are the threats that MNCs and companies can monopolize the food supply

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The probable disadvantage of the patenting of the genetically modified organism or the threats that multinational corporations and company which can monopolize the food supply and some of the case, some of the issues which we have seen till now that yes there are chances of monopolizing the certain sectors including the food sector. So, this patent of genetically modified crops is going to give us a new challenge. And this type issue is the real issue for many developing and list developed countries because all these crops are not produced by it is small formers or not produced by the general formers in developing in list of country.

But some of the multinational corporations like Monsanto and other MNCS in develop countries. They are really producing such crops and they are really the breeders of such variety and they are really trying to explode there market in many part of the world today.

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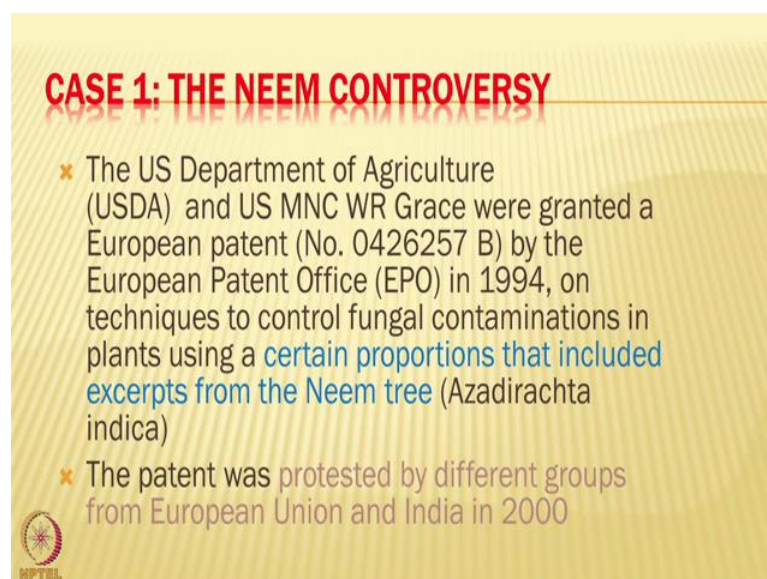


PATENTS AND GM CROPS...

- For instance, the 'terminator genes' or 'suicide seeds' make sterile next-generation plants and compel farmers to buy seeds for the next harvesting season
- The utility patent protection unlocked the doors for MNCs like Monsanto to enter into the global seeds and pesticide business
- Patents of seeds by MNCs prevent farmers to preserve patented seeds for the next crop season

So, one of the examples today is the terminated genes or suicide seeds, make sterile next generation plants and compel farmers to buy seeds for the next harvesting seasons. The utility patent protection unlocked the doors for multinational corporations like Monsanto to enter into the global seeds, and pesticide business and patents of seeds by MNCs prevent formers to prevent patented seeds for the next crop season. And we have some of the cases related to Monsanto and some of the huge coming out that Monsanto is also challenge some of the formers who has really kept certain seeds for pressure being those seeds for the next crop.

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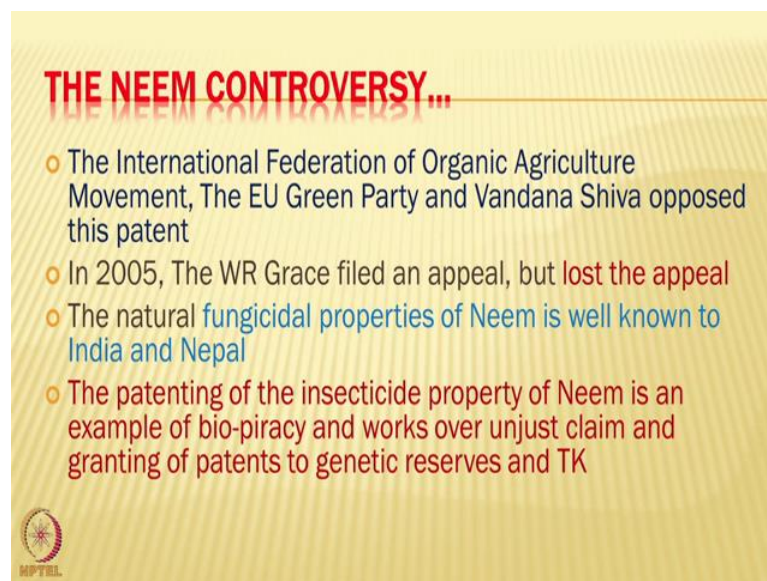
CASE 1: THE NEEM CONTROVERSY

- ✖ The US Department of Agriculture (USDA) and US MNC WR Grace were granted a European patent (No. 0426257 B) by the European Patent Office (EPO) in 1994, on techniques to control fungal contaminations in plants using a certain proportions that included excerpts from the Neem tree (Azadirachta indica)
- ✖ The patent was protested by different groups from European Union and India in 2000

So such examples are answers we which are not giving us any good or any good feel to the developing countries from us today and this is one of the challenging issue in front of us. Apart from that one cannot really miss to discuss the new controversy related to India. The US department of agriculture and US MNC the WR grace were granted a European patent, by the European patent office in 1994 on techniques to control fungal contamination, in plants using a certain proportion that included the neem tree.


So the patent was, this particular patent was protested by different groups from European Union and India in 2000 and why it was because the international federation of organic agriculture movement. The US Green Party and Vandana Shiva opposed this patent. In 2005 also the WR grace filed appeal, but lost the appeal the next will properties of neem is well known to India and Nepal and the patenting of the insecticide property of neem is an example of bio piracy and works of our unjust claim and granting up patents to genetic reserves international knowledge which is also presented as TK.

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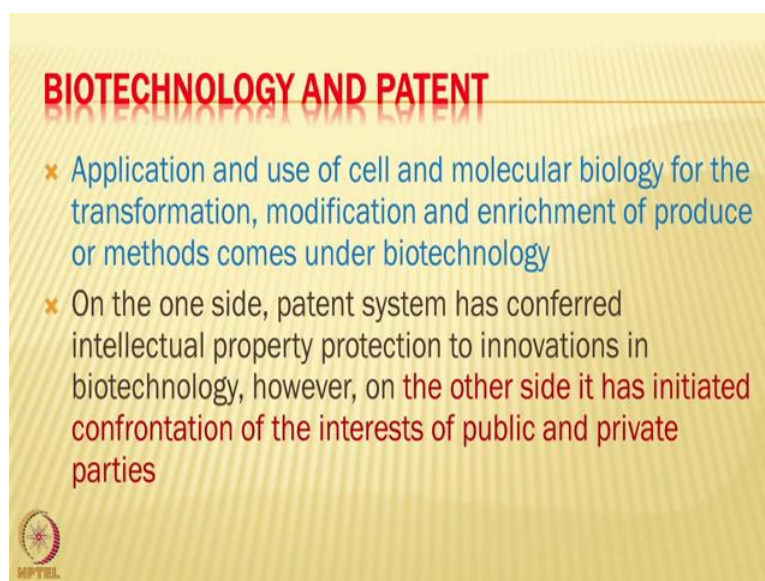


THE NEEM CONTROVERSY...

- The International Federation of Organic Agriculture Movement, The EU Green Party and Vandana Shiva opposed this patent
- In 2005, The WR Grace filed an appeal, but **lost the appeal**
- The natural **fungicidal properties of Neem is well known to India and Nepal**
- The patenting of the insecticide property of Neem is an example of bio-piracy and works over unjust claim and granting of patents to genetic reserves and TK



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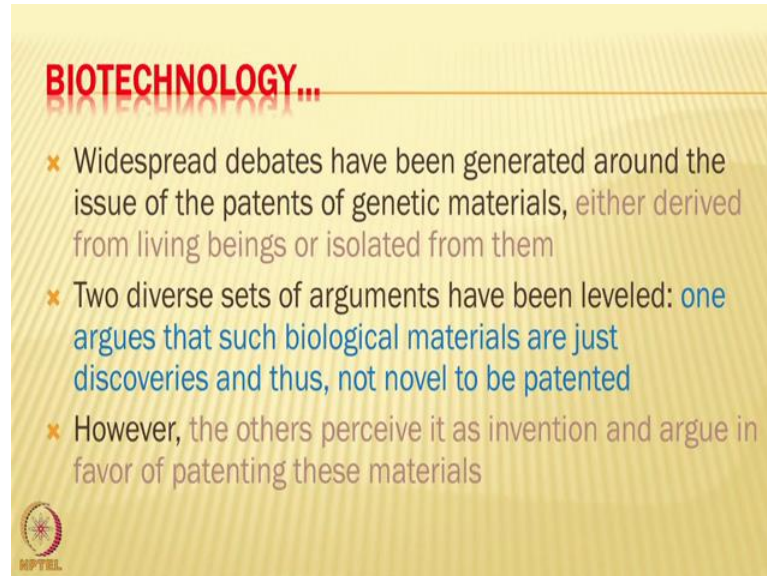
Application and huge of sell and molecular biology further transformation modification and in which mean top produce, product or meters comes under by technology. On the one side the current patent system has confirmed intellectual property protection to innovation in biotechnology. However, on the other side it has initiated confrontation of the interests of public and private parties. So it is true that such innovations in biotechnology is helping us to would really have high yield variety, say high yield variety plants and moving ahead in terms of the challenge which is on the way in terms of food security or really helping those farmers which has low productivity problem due to the traditional seats.

But at same time it also created one of the challenge for the larger interest of the public and private parties which we are not suppose to even some of the farmers, who had traditional mind set of reserve being seats and we were really having a free mind set to do the forming. Now they are really challenged due to the new set of rules or the new set of patented items, patented seats which is available in the market and the best of part of these seats are be produced in a way, this sort seats are prepared in a way that even if the farmers are allowed to keep those seeds.

First thing is they are not allowed to keep, and the second thing is even if they are allowed to keep those seats, nothing is going to be achieved for the formers because the seats are developed in a way that even the formers will pressure bit there will not be able


to get anything out of that seeds because of the engineering genetic engineering done with those seeds.

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BIOTECHNOLOGY...

- ✗ Widespread debates have been generated around the issue of the patents of genetic materials, either derived from living beings or isolated from them
- ✗ Two diverse sets of arguments have been leveled: one argues that such biological materials are just discoveries and thus, not novel to be patented
- ✗ However, the others perceive it as invention and argue in favor of patenting these materials

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So there is a why debate generated around the issue of the patents of genetic materials, either derived from the living beings or isolated from them. So two diverse sets of argument have been leveled one argues that such biological material are just discoveries and thus not novel to be patented.

However the other perceives it has the invention and argue in favor of patenting these materials. So, both the debate and the argument are really in the huge.

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BIOTECHNOLOGY...

- ✖ Activists and some farmers alleged that **Monsanto** and other companies have resorted to **unfair patent protection to exploit the natural rights of farmers** to save new seeds produced during yield
- ✖ Parallel accusations have been levelled against **Myriad Genetics (US)** which is facing its own **Supreme Court patent challenge**




Activists are some farmers alleged that Monsanto another companies have resorted to unfair patent protection to exploit the natural rights of farmers, to save new seeds produced during yield. So the parallel acquisitions have been leveled against Madrid genetics which is facing its own Supreme Court patent challenge.

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CASE 2: BASMATI RICE

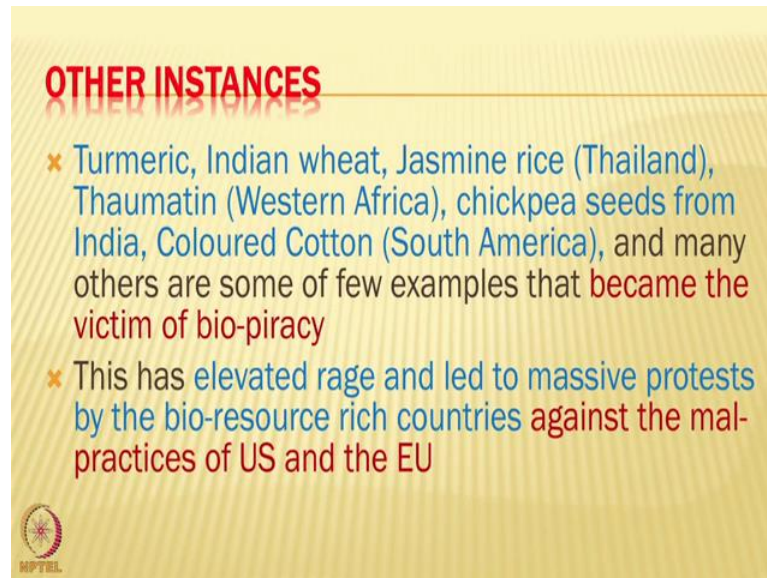
- ✖ RiceTec, US based company patented (No. 5663484) certain **crossbreeds of basmati and half-dwarf long-grain rice in 1997**
- ✖ The patent was awarded by US Patent and Trademark Office (USPTO)
- ✖ The government of India interfered and **three of the 20 claims granted to RiceTec were annulled by UPSTO in 2001**



So this source that the issues, related to the patent especially in the GM food sector is not view and time to time these US based companies and other companies in developed countries are really work hard to grab the opportunity to patent certain knowledge, which


is the traditional knowledge for a group of farmers alternation knowledge for a generation to generation in country like India and other Himalayan nature.

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OTHER INSTANCES

- ✗ Turmeric, Indian wheat, Jasmine rice (Thailand), Thaumatin (Western Africa), chickpea seeds from India, Coloured Cotton (South America), and many others are some of few examples that became the victim of bio-piracy
- ✗ This has elevated rage and led to massive protests by the bio-resource rich countries against the mal-practices of US and the EU

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Second best example may be the example of Basmati rice. Rice take you expressed company patented certain cross beats of Basmati and half drop long rent rice in 1997 the patent was awarded by US patent and trade mark office and the government of India interfered and 3 of the 20 claims granted to rice take where again challenged. This type of example is not where, we can say that it was a just a single example, but we have another examples for from India that is the Turmeric, Indian wheat, Jasmine rice from Thailand, Thaumatin, Western African product, Chickpea seeds from India colored cotton from South America and many others products are some the few examples that became the victim of bio piracy bio receipt.

So, Indira Gandhi agriculture university in Chhattisgarh has collected some of the data, that 2600 varieties of rice were available in Chhattisgarh, but today it has the client from 2600 to almost the level of 100 and Chhattisgarh Mukti Moksha once upon a time has a huge protest against the Biopiracy going on from the Chhattisgarh reason because many scientist and many forms from outside involved, they were trying to really collect a genes of different rice and there was huge case of Biopiracy from India.

So this type of examples, this type of cases gives us to idea, that this has really elevated and led to massive protests by the bio resource rich countries, against the malpractices of united states and the and the European union.

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So another issues which is equally important and challenging for the intellectual property right especially for the patent system is the pharmaceutical patents which have increased the cost of essential and life saving drugs. This has created a barrier to access to the medicine because prices, price of nobody since which is based on the level of R and D and innovation is very high and it is not so easy to really have such medicine on the low price.

Even if the government is interfering in, providing sub certain subsidy and it is not so easy for every government to provide certain subsidy and it also depends on the size of the population which countries having so country like India is one of the country which has to really get a very bad impact of such pharmaceutical patents. And ultimately we have many parts of world especially Africa and Asia are facing severe health hazards like HIV Aids tuberculosis malaria and recently the influenza and swine flu.

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PHARMACEUTICALS AND PUBLIC HEALTH...

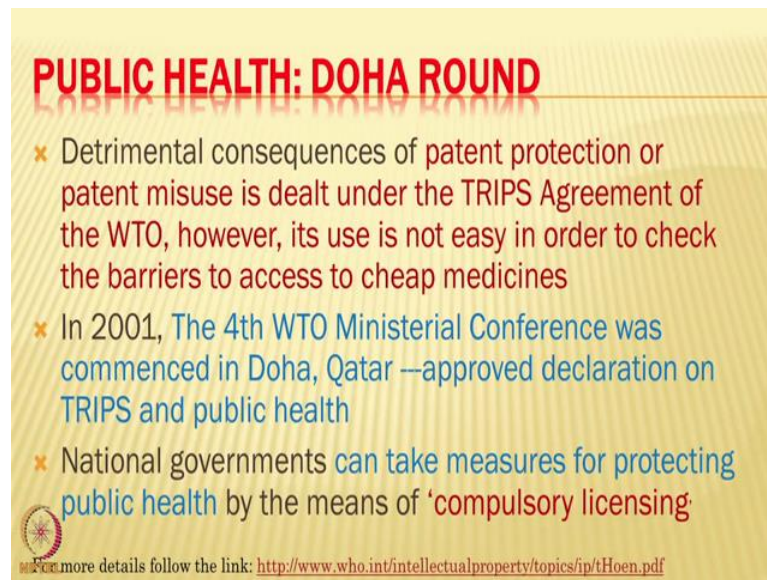
- ✖ Many parts of the world, especially, Africa and Asia are facing severe health hazards like HIV/AIDS, tuberculosis, malaria, and recently, avian influenza and swine flu
- ✖ According to WHO, more than 100 million people in the East Mediterranean Region (Afghanistan, Iraq, Lebanon, Palestine, Sudan, Somalia), do not have access to medicines

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So according to World Health Organization more than 100 million people in the east Mediterranean region, do not have access to medicine and these are one of the challenging issue and task in front of the world community when we are really having the pharmaceutical patent as one of the example.

So, though around which is one of the most controversial daunt and that included public health has one of the issue, that deter detrimental consequences of patent protection or patent misuse is dealt under the trips agreement of the WTO. However, its use is not easy in order to check the barriers to access to the cheap medicine.

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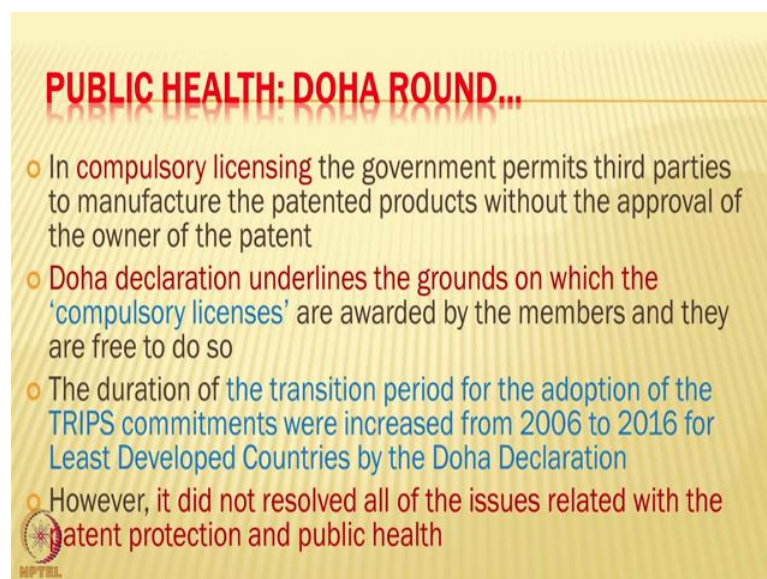
PUBLIC HEALTH: DOHA ROUND

- ✘ Detrimental consequences of patent protection or patent misuse is dealt under the TRIPS Agreement of the WTO, however, its use is not easy in order to check the barriers to access to cheap medicines
- ✘ In 2001, The 4th WTO Ministerial Conference was commenced in Doha, Qatar —approved declaration on TRIPS and public health
- ✘ National governments can take measures for protecting public health by the means of 'compulsory licensing'

For more details follow the link: <http://www.who.int/intellectualproperty/topics/ip/tHoen.pdf>

In 2001, the 4th WTO ministerial conference was commenced in Doha and approved declaration on TRIPS and public health and national governments can take measures for protecting public health by the means of compulsory licensing.

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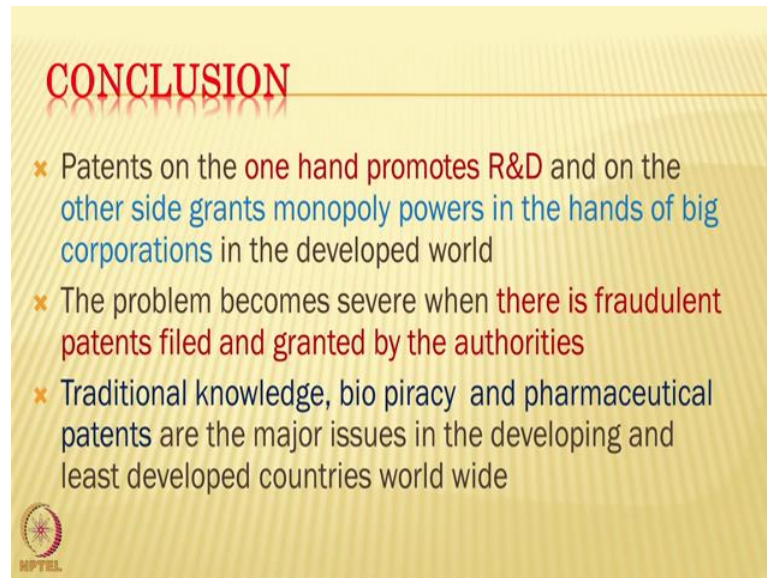
PUBLIC HEALTH: DOHA ROUND...

- In compulsory licensing the government permits third parties to manufacture the patented products without the approval of the owner of the patent
- Doha declaration underlines the grounds on which the 'compulsory licenses' are awarded by the members and they are free to do so
- The duration of the transition period for the adoption of the TRIPS commitments were increased from 2006 to 2016 for Least Developed Countries by the Doha Declaration
- However, it did not resolved all of the issues related with the patent protection and public health

So this compulsory licensing is in the government permits third party to manufacture the patented products, without the approval of the owner of the patent. Doha declaration underlines the grounds on which the compulsory licenses are awarded by the members and they are free to do so.

But, the duration of the transition period for the adoption of the TRIPS agreements was increased from 2006 to 2016 for the list of developed countries by the Doha Round. So this year is the last year of that transition for the list of developing countries. However, it did not resolve all the issues related with the patent protection and public health.

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CONCLUSION

- ✖ Patents on the one hand promote R&D and on the other side grant monopoly powers in the hands of big corporations in the developed world
- ✖ The problem becomes severe when there are fraudulent patents filed and granted by the authorities
- ✖ Traditional knowledge, bio piracy and pharmaceutical patents are the major issues in the developing and least developed world wide

So as a part of the conclusion, patents on the one hand promote R and D and on the other side grant monopoly powers in the hand of big corporations in the developed world. Because the country which has more investment capacity there again a great investors in R and D and innovations. So, the problem becomes severe when there is a fraudulent patents filled and granted by the authorities. We have seen in case of Basmati rice and we have seen the case of neem, where certain authorities have granted patent rights.

But the point is it is not one case, but there are large number of cases of bio piracy, piracy of traditional knowledge today and pharmaceutical patents or again one of the major issues. So when we talk about the patent certain issues, which is connected to the day to day life and the mass population, cannot be ignored it is true that Doha Round has taken care of certain issues related to public health. But it is also true that in the current frame work of the new patent rights developing un-list of the countries are not really

equipped enough to fight with the local issues in health and digit it is which really puts comment into the crisis.

So, in such a situation it is important to really have a very comprehensive exercise done by each developing un-list of developing countries to counter the new patent system.

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So, this is one of the discussed which I wanted to have it on the issues related to the contemporary issues related to patent.

I hope these reading will help you to understand more about the current issues related to intellectual property especially the patent rights.

Thank you.