

2018 India International Workshop on India-EU Collaboration in Seed Sector Development & PVP**Day 1 22/2/2018****PPV&FR, INDIA - Dr. Prabhu, Chairperson PPVFRA**

The PPV & FR act was enacted in 2001. The act defines both the breeder and the farmer. The breeder breeds the new variety. The farmer cultivates that variety and continues to develop it and therefore is also a breeder.

Seed act – was enacted in 1966.

EDV is defined as a variety that is based on an existing variety and is only slightly improved (1 trait).

Duration of protection - Trees & vines: 9 years & 9 years extended – 18 in total.

DUS testing duration – 2 locations for one crop season for extant varieties. 2 locations for 2 crop seasons for new varieties. EDV – case by case basis. If DUS testing fails – lab based description?

The PVP affords the breeder the rights to produce, sell, market, distribute and import their variety. The rights extend to harvested material even though the act does not specify this. The research rights allow any party to use the new variety for breeding. However, any repeated commercial use of a protected variety that is unauthorized is an infringement. Repeated use for commercialization (which requires authorization)– is referring to *hybrids*. At the moment this clause is interpreted incorrectly and today they will discuss ways to regularize this.

Note that farmers are not charged for plant variety protection as other breeders are. These costs include the fixed fee, the annual fee and a percentage of royalties as well as a percentage of revenue.

Farmers are defined very specifically:

1. Cultivates crops
2. Supervises cultivation
3. Conserves and protects wild varieties

Important note: grape growers are farmers under the PVP&FR Act 2011.

Farmers rights on seed: save, use, sow, re-sow, exchange, share, sell. **Entitled to sell non-branded seed as his own material.**

The farmer is also protected under **innocent infringement**. If the farmer proves that he was unaware that the variety was protected, there is no infringement. Of course this can be claimed only once.

Compulsory licensing – if the government thinks that the seed price is too high making it inaccessible, they award compulsory licensing so that farmers can have access.

The presentation stated the forms of relief by courts as well as specifying some unlawful actions including: selling protected material under a false denomination, and falsely stating that a non-protected variety is protected.

“Genome Saviour” awards are granted to communities and farmers, which have monetary value.

There is a summary of applications per year by category – note that the great bulk of applications are from farmers.

General Introduction of UPOV -Peter Button, UPOV Vice-Secretary General

The aim is to encourage plant breeding to create new varieties for the benefit of society. France wheat yields 1815 – 2005 was shown to see how the introduction of plant breeding has increased yields by many folds, and that prior to plant breeding there was no change in yield. Under the UPOV system anyone can be a breeder. UPOV believes breeding diversity is key: encourage individual farmers, farmers cooperatives, large private corporations as well as breeding in the public sector.

Some examples:

UC Davis: they protect their strawberry varieties and give preferential treatment to local California strawberry growers.

The ARC in the RSA only license companies that agree to work with local small shareholder farms, thereby benefiting them.

However, since the 1960s the private sector has grown relative to the public sector which remains stable.

Joining UPOV is an advantage, some examples:

UC Davis only releases its varieties to UPOV member countries. Spain for instance created a 1B dollar industry based on UC Davis strawberry varieties.

In Latin America – at the year the countries joined UPOV, there was a sudden peak of PVP applications from foreign entities especially.

Vietnam – joined UPOV in 2006 and subsequently the seed sector was transformed: once there was an option for companies to protect their varieties, they created an effective system for distribution of those varieties that were not in place until then, and this contributed to the farmers' access to new varieties.

Income is necessary to breed. Restricting it will restrict breeding. There are some exceptions however. Subsistence farmers are free to use protected varieties as they see fit for instance.

More examples of benefits:

1. **Europe** - UPOV started in Paris in 1961, so we begin with Europe. Steffen Noleppa of HFFA Research conducted research of benefits of breeding new varieties within 15 years (2000-2013) – this research is very interesting – look at slides.
2. **Japan** – the Yamagata prefectural government holds the right for a rice variety (an overproduced crop), that sells for twice the price of the best rice variety.
3. **Vietnam** – HFFA Research showed that the income of farmers is 24% higher in the 10 years since accession of Vietnam to UPOV. 5B higher income per year in the 10 years since accession.
4. **Kenya** – cut flower industry began in the 90's but they didn't have the new varieties to compete in the EU market. Since accession to UPOV, the value of the industry increased 8-fold.
5. **93% of cut flower exports are from UPOV countries.**
6. **Argentina** – wild flower varieties were provided to breeders in order that they breed commercially viable varieties from these. Breeders give back 50% of income in exchange for this.
7. **Canada** – joined the 1978 act in 1991. Reviewed the impact of joining UPOV in 10 years. They found many benefits in the cut flower and potato industries. After they acceded to UPOV 91, Bayer Crop Science began investing in a local wheat breeding project.

Explanation of the EU System (Francesco Mattina, CPVO)

Regulation 2100/94 implements the regulations set out in UPOV 91'. 28 member states are included but of those, in 4 states: Greece, Luxembourg, Cyprus, Malta, national system of PVP protection is not in line

with the EU one. As long as the CPVO title exists, national protection in these countries is not possible however. Note that the CPVO has an agreement of purchasing DUS reports from NZ and AU. At the moment 85% of fees are paid by the applicants and the CPVO aims to cover 100% of fees in the future. In the CPVO there are the following exemptions: acts that are not commercial (private use), farmers are authorized to use farm saved seed for propagating on their own holdings – fodder plants only, breeders exemption (which unlike India’s “research exemption” includes the breeder’s ability to commercialize independently later on).

Enforcement of EU rights is at national level, there is no specialized EU court. For this reason it is possible to “court shop” for the court best on litigation when deciding where to try the case. You can choose: domicile of defendant, domicile of plaintiff, where the damage occurred, location of CPVO (France). Harmonization according to enforcement directive 2004/48/EC. The CPVO is not involved in royalty collection for farm-saved seed. Note there is a Caselaw database managed by the CPVO and they rely on contributors (we should contribute any court cases we have). At the moment the highest record is in Spain, where the most are criminal cases.

International cooperation:

- IPKEY China
- IPC-EUI India
- Latin America Countries

91’ system – EDV issue: The CPVO don’t judge whether a variety is an EDV or not (unlike in India). They register EDV’s if the applicant says the variety is an EDV.

India IP Policy– Mr. Agrawal, DIPP, GOI

The last 3-4 years have been a gamechanger for India IP. Patent & Trademark processes have been thoroughly revamped. Up until now it took 5-7 years for patents to get accepted and they plan to reduce the timeline to 18 mo’. Trademark examination time has been reduced from 18 months to one.

Enforcement: a number of training programs have been initiated for the first time in an effort to improve overall IP climate in India. Judgements, especially from Delhi, are currently often in favor of IP holders.

Plantum Presentation – Ms. Judith de Roos-Blokland

Stressed that it is important that all parties involved are clear on the interpretation of the laws, for the breeders: in order to draft the license agreements accordingly, and for the farmers: to be clear on their rights and limits of those rights. All parties want to know what to expect in India and suggested adding explanatory notes to the existing law. Breeders want all decision making to be based on reliable laws. For instance they mentioned that harvested material is protected but this is not defined in the law. Judith pointed out that for breeders this sort of thing is unreliable and there is a need to include such a provision in the legal basis.

Effective protection is based on 3 processes:

1. Transparent application process, with a defined timeline for all plant species. High quality DUS testing system in order for the descriptions to be available in case of court cases, or takeover of DUS testing for certain species.
2. Scope of right – provisional protection exists in India but still not 100% clear if the court will accept right holder's provisional rights. Clear protection for both propagating and harvested material. Addressed the issue of Farm Saved Seed. In the NL, all farmers who use farm saved seed and are under 15 Ha, do not compensate the breeder. Commercial farmers need to compensate. A different law in the NL defines private non-commercial use. However, in India, both notions co-exist in one article, and that is confusing. Only in the FAQ there is a clarification that the farmer's rights apply only to "small farmers involved in subsistence farming" – this needs clarification within the law.
3. Rights enforcement – too many exemptions in the law make the rights more difficult to enforce. For instance, the breeder must prove that the brand/ denomination was used by the farmer upon sale for infringement to exist. How can the breeder do this if there is no invoicing involved?

BDP Presentation – Dieter Rucker

BDP breeders invest over 15% of turnover in R&D. Crops include cereals, oil crops, ornamentals and others. Most breeders are medium to small companies but are very strong in the international market.

There are 2 options for breeding:

1. State institutes funded by the government, mostly in social economies.

2. In market economies breeding is privately financed and relies on royalties. Royalties are on average 15% of the seed price, and only these go to the breeder.

Integrated seed companies will breed, produce and market seeds. Examples are Pioneer (maize). They dominate the market. Three step production systems are systems where plant breeding and seed production are separated, and this is the system most used for cereals. In this context seed production is done by a separate company and by the farmer.

In Germany there are standard contracts for seed **production** and **marketing** (separate contracts). The name of the game is exclusivity: as no production company would agree to pay royalties if there was another company producing seeds (would be considered unfair competition). The seeds are only handled by licensed parties. The variety owner must be in a position to control all the partners to make sure they are all paying the required license fees. The STV is the organization that controls adherence to the license and payment of required fees.

Dieter suggests using this setup in India as well. In order for it to work though, he stresses that the provision of seeds needs to be exclusive. In other words the farmer's privilege needs to be *restricted* to small farmers selling the variety in local markets.

CIOPORA Presentation – Mr. Edgar Krieger

Very positive presentation on CIOPORA's organization. Stressed that we are an international organization representing 100 direct members and 200 breeders all in all. Represent most cut-rose breeders worldwide. Meiflemingue is the first and possible only rose protected in India.

CIOPORA breeders rely on effective IP protection. One main reason is that ornamentals and fruits are high value "cash" crops, as opposed to agricultural crops.

Edgar stressed that the breeders focus on creating more efficient varieties that reduce costs for the growers and increase profits. They need return on investment to sustain breeding, as it can take up to 22 years to create a new variety. However, royalties calculated

60% of the titles worldwide are represented by ornamentals and fruit applications, but in India they are a very small percentage. CIOPORA wants this to change.

Edgar stressed that the situation of CIOPORA is unique, because we are dealing with vegetative propagation – therefore it is possible for persons skilled in the art to propagate within a very short time a large amount of true-type plants and increase the farm size. The farmers' right can't apply to vegetatively reproduced ornamental and fruit varieties. The biggest concern of CIOPORA's breeders is that they will not be able to control self-propagation and sale of propagation material, and may explain why so few applications exist in India. Breeders don't want to go to court, they need to minimize disputes, and this can only happen if the law is transparent to all. The current law is hampering investment in India. Edgar believes that small changes in the law can make a huge difference to the situation in India, a few sentences clearly explaining that the farmer's exemptions do not apply to vegetatively propagated crops. Edgar says that the support of growers and trade in India is hoped for.

ESA Presentation – Ms. Szonja Csorgo

Many members currently work in India. The issues that were raised:

1. Very long application process, especially when hybrids are submitted and the parentals need to be submitted. It is unclear why these samples need to be submitted, and it is not clear what they samples are used for. Clearly this request is holding them back.
2. The costs are not clear and fixed, and this hinders breeders from calculating the annual fees.
3. They would very much appreciate longer protection terms.
4. Article 26 – Benefit-sharing: not clear how this provision in the PVP law relates to the Biodiversity Act, how it will be implemented, and why it is needed. Currently, the variety application is not given a title during the first 3 years, and during this time a party could claim benefit sharing. However, it is not clear under which terms the claim could be made, on what basis and by whom.

Questions from the audience: I did not summarize this point, difficult to understand the Q&A session.

Legal Aspects of PVP – Ms. Yolanda Huerta, UPOV

These are the key pillars:

1 – Protection

2 – Exercise of rights (licensing) – is at the breeders' discretion and up to their policy. The only exception is compulsory licensing. Until now, UPOV is not aware of this having taken place.

3 – Enforcement – why is this required? In case something goes wrong. This is a tool that facilitates the negotiation between the breeder and the licensee and raises awareness of the rights. Without effective enforcement, risks are higher for parties involved.

2016 Enforcement Seminar in Vietnam:

Challenges for breeders: the reality is that the costs of reproducing protected varieties are relatively low but the costs of collecting evidence, investigating and going to court to enforce rights are high. This is a main challenge. Breeders need breeders' organizations and national authorities backing in order to enforce their rights.

UPOV members experience on enforcement: one of the conclusions was that DNA profiling is very important for enforcement.

Example of how PVP is used: Agroscope is a public institution that carries out the breeding, and DSP is a farmer's cooperative that co-owns the varieties bred with Agroscope, and they take care of all the other processes required. Income is shared.

Legal issues of PVP in India – Dr. Lakshmikumaran, Lakshmikumaran & Sridharan

Discussed the need for clarity with regard to benefit sharing, and when it is required, EDVs and exactly how they are defined in India and finally the issue of ever changing PVR costs.

Panel Discussion: Mr. Kees Van Ettehoven

Noted that there are some cases where the same laws apply in UPOV and India, but different descriptions are used (synonyms).

Kees is concerned about antonyms: where India and UPOV law use the same words, but mean entirely different things. For example:

- The word EDV is used very differently in the UPOV and Indian contexts. In India an EDV is essentially a variety that is quite different from the parental as long as it is derived from it.
- In the UPOV world, a non-commercialized parental line is considered novel, however in India it is not novel as it was used for breeding. The definition of novelty is totally different and not clear.

Q: There are different legal systems: PVP legislation & phytosanitary legislation for quarantine. How are these connected? Do protected varieties need to undergo phytosanitary testing?

A: Kees says that the only criteria for gaining PVP are the DUS. Dr. Agrawal added that varieties coming from abroad undergo phytosanitary testing of course, but not local varieties.

Q: What if the breeder is using farmers varieties for breeding? And what about benefit sharing?

A: Breeders using farmers' varieties must provide benefit sharing, and that is decided judiciously.

A: Currently the National Seed Bank is an institution that assists farmers in protecting their varieties.

Day 2 – 23/2/2018

EDV, Researchers Rights & Benefit Sharing - Dr. Singh, India Head of Genetics

Clause 23 refers to EDV. Clause 30 refers to researchers' rights (basically breeders' exemption without the commercialization rights).

Clause 30: permission of the breeder is *not* required for conducting experimental research or for using the protected variety initially (= one time only) for breeding. Note that this clause allows the case where the breeder has used molecular methods to extract a valuable gene from the protected variety and using it for their own newly bred variety.

When is the breeder's authorization required?

1. For commercialization of the new variety bred from the protected one.
2. For breeding or producing hybrids (then the protected parental variety needs to be reused).

Dr. Singh believes that molecular markers should be allowed to differentiate between the EDV and the initial variety even if there is no difference discernable in the field, moreover difference by markers should be acceptable as a method to establish an EDV (note: personally, I find this statement VERY problematic and in contrast to the definition of an EDV by UPOV).

What is an IDV (indifferently derived variety)? Not clear on this point.

Benefit Sharing: the institute invites parties to claim BS, and then the party begins the process by claiming BS for the new variety.

How to divide benefits?

The value of F1 (defined in India as “hybrid”), will be divided according to the parentals. For instance, if 1 parent of 2 is a traditional variety, value will be divided 50/50 between the parties. However, if only a gene of the traditional variety is used, it is more difficult to decide how value will be distributed.

ICAR Model vs Kani Model: the first model was explained briefly, the second not at all.

One statement made was that the judgement of the technical “expert” was more important and reliable than the “legal” judgement, and that it should be the basis of all decision making on these issues, as opposed to making decisions based on legal advice/ court hearings.

Protecting researchers’ rights and post commercialization benefit sharing in horticultural crops

– Dr. Kalia, Former Head IARI

(Note: IARI CIOPORA member)?

The purpose of this lecture is to present some models of benefit sharing in India. Showed some examples of important crops:

1. Carrot varieties that are both colorful and provide higher amounts of vitamin D.
2. Radishes that are more visually attractive as well as nutritious.
3. Cauliflower with higher concentrations of vitamin A (beta-carotene) was bred to combat vitamin A deficiencies in India.
4. Mango varieties
5. Pusa Seedless (white), Pusa Urvashi (white), Pusa Navrang (black), Pusa Swarnika (white, hybrid).
6. Citrus (acid lime, sweet orange).
7. Cut flowers: rose, marigold

- Dr. Dinesh, Director Indian Institute of Horticultural Research

(note: CIOPORA member?)

One of the first in India to open up licensing and commercialization of research materials. There are very high quality crops bred and protected (a list is provided), including okra.

Licensing (MoU):

1. Fees: the institute charges the intellectual fee, 18% GST and 5% royalty. However, there are licensees that don't want to pay royalties and then they charge higher intellectual fees.
2. Non-exclusive license
3. IIHR has full PPVFRA rights – license has not PPVFRA registration rights.
4. Licensee has no right to share materials with 3rd parties.
5. License has to commercialize under the denomination.
6. Licensee has to pay the royalty.

Benefit sharing: is done post-harvest.

Parentals of hybrids are sold for 6000 USD.

Protecting Hybrids vs parentals in seed propagated varieties - Dr. Nagarathna, PPVFRA Registrar

- Defined “variety” according to the PPVFRA act.
- Explained the process of creating a new hybrid.

Explained that in order for the hybrid to be registered, the parental lines must be registerable as well. Furthermore, the breeder is required to provide both seeds of the parental lines and the hybrid. Why is this required? In the case of compulsory licensing, seeds of the parental lines will be provided to the licensee in order that they will be able to produce and market the hybrid. The legal basis: according to the seed act, submitting the seeds of parents is not required, however the PVP office has issued that requirement. The PVP office requirement has been contested in the high court (I believe to no avail or else the issue is ongoing).

To date there are over 2000 hybrid applications and there are over 500 parental line applications.

Novelty of the parents depends on the hybrids.

If the hybrid is commercial for over the year, the parent lines can be only protected as extant varieties. If the parents are new, and the hybrid is extant, the protection can be given for 45 years?! **Need to check this point in the presentation.**

An explanatory note was added on the issue of submitting parent material of hybrids – why is this required?

There were 2 reasons:

1. To combat monopolization of the variety by the breeder.

2. For compulsory licensing

The process of compulsory licensing was also explained:

In the case that the applicant and a 3rd party negotiate the existing license and do not reach an agreement. The 3rd party can go to the government and request to receive compulsory licensing. Compulsory license can only be given after 4 years.

At this point the 3rd party will receive a new license that the applicant did not issue, but the government issues. It is mentioned that the applicant can still disagree to the way the license is drafted, but in the end of the day the government decides.

To date there is no case law for compulsory licensing in the PVP act, so all is theoretical. The last time this occurred was 50 years ago in the case of a medicine. The opinion is that only in the case of a national emergency the compulsory licensing would be applicable.

Dr. Lakshmikumaran expressed the concern that the parental lines of hybrids when submitted to the Ministry will be misused by the authorities. They have advised that if the main use of the parental material is for compulsory licensing, then it is her opinion that when the applicant is told that they must license a 3rd party, SUBSEQUENTLY, they should provide the parental lines. As this is a very uncommon case, the requirement of the material to the Ministry in advance is not warranted.

Protecting Hybrids vs parentals in vegetatively propagated varieties – Dr. Desai, Registrar PPVFRA

Discussed whether the homozygous parent or the heterozygous F1 hybrid should be registered, in the context of male sterility. The opinion that the breeder will benefit from registering both parents and hybrid.

Convention Country Agreement India/ Germany/ NL – Dr. Freudenstein, BSA

Update of the previous events and current status.

His proposal for collaboration on the EU level was positively accepted.

Open discussion:

1. The issues pertaining to table grapes came up specifically and it was clarified that the issues would be discussed in detail to ensure that the table grape breeders are receiving the best varieties as well as protect the rights of Indian farmers.

2. What are the research rights in the context of seed propagated hybrid crops? Is it possible to take genetic material from a hybrid crop and insert it to another? What if a breeder breeds a new variety, but needs a protected parent of a protected hybrid in order to propagate? Peter (UPOV) responded that if the parent lines are required for commercialization of a hybrid (i.e. repeated use), the breeder must request the title owner's permission to use them, but under UPOV law there is no obligation for the title owner to do give this permission. Under Indian law at the moment repeated use may be OK, and at least there is no enforcement.

There was a case where hybrids were protected, and they were marketed a year later under different names. As a result, the title owner wrote a letter to the infringers, but there was no action taken to protect the rights of the title owner.

3. Discussed whether the objective of the PVP act and subsequent DUS testing is to conduct testing of *commercial viability* in India. On the one hand, if a variety is not commercially viable in India, the farmers could lose a lot of money if they plant it, and the government is in a way accountable. On the other hand, the DUS test is not conducted in order to check commercial viability. Kees (NL) confirmed that the applicant would be very interested if India would agree to take over reports from other UPOV countries. India currently does not accept trials from other UPOV countries, arguing that the conditions in India are different and the variety may not be *commercially viable* in India. Kees's opinion is that this thinking is incorrect since that is not the objective of DUS testing. Moreover, the reason CPVO countries do not always accept DUS tests from other UPOV countries is that they may not agree with some methodology (the varieties in the reference collection, trials on breeders lands) and therefore they would want to redo the test.
4. Kees brought up the issue of parental line protection: in the NL, the parental lines were not protected for hybrid vegetables, as breeders considered they were safe. However, as the F1 hybrids were sent abroad, the companies decided to protect the parental lines as well. The thought was that since the hybrids can't be propagated unless using the parental lines are repeatedly used, it would not be possible to reproduce the F1 hybrid. Vegetative reproduction is covered as an infringement since the F1 hybrid is protected as well.
5. Farmers Rights – ESA asked to go back to this point and to acknowledge that “CIOPORA crops” are not included in the act. Dr. Agrawal said this would be addressed. Furthermore, Plantum requested that there be a clarification that the farm-saved seed provision is only for subsistence farmers, Dr. Agrawal said that is indeed the case, but obviously that is only his word, and the

court will go on the law and not his word. The India authorities have explained that the provision was put in to protect the tradition of “neighborly gifts” between farmers. If a variety is doing well on a farmer’s land, that farmer will present to his neighbor some seeds so that the neighbor may also benefit.

6. Provisional protection: at the moment it is not well respected and this should be changed. The point was noted.

Potato: contracts with farmers – Mehindra Group

License agreements signed and binding. The Mehindra HZPC Group is committed to assisting farmers by providing services required under one umbrella.

Main requirements of the farmer and the ways Mehindra Group meets these requirements:

1. Access to good quality seed, problematic if the price is out of reach: Mehindra purchases seed in bulk and provides it to the farmer, together with some other required items in one package, to ensure they are used by the farmer. Pipeline varieties are delivered on credit.
2. Access to farmer credit as cash flow is an issue: Mehindra gives out loans.
3. Access to markets: Mehindra tries to open new markets for the growers.
4. Access to the technical knowhow: Mehindra sends grower groups to farms in Europe to learn how to grow the new varieties.
5. Access to pesticides, fertilizers and machinery, the farmer can’t invest heavily for a small area: Mehindra makes the required fertilizers and pesticides in-house, and purchases machinery that is used by several farms.
6. Insurance: schemes are not enforced by Mehindra but are available.

The app MY Farm used for collecting data about the farmers. The farmers update the app monthly.

Recommendations following the sessions:

1. Continue the collaboration and efforts for harmonization, including online learning courses.
2. Improve the enabling environment for plant breeders and seed companies to invest in India.
3. Consider introducing specific provisions in the Indian law in order to make investments in the **ornamentals** industry more attractive. Edgar supported the recommendation and added that he would recommend changing the wording of the recommendation to vegetatively propagated

fruits and ornamentals. Plantum pointed out that vegetables are also included. They both agreed on changing the wording to **horticultural** industry. A statement was made on behalf of the grape growers, saying that the wording “vegetatively reproduced species” should be included. It was decided that they will add an explanation on the meaning of the word horticultural.

4. Continuing the dialogue at the EU level **instead of** the bi-lateral level. ESA supported this recommendation. Francesco (CPVO) mentioned that they collaborate with EU-IPO (IP Rights Office that implements the rights on behalf of the European Commission). The CPVO asked that PVP be covered in the IPO collaboration budget. The CPVO will request that the support of the current project be continued, and hopes that their request gets a positive response. BSA requested changing the wording to **as well as**.
5. Continue the current working programs between India, Germany and NL aimed at technical training, capacity building and harmonization.
6. Explore possibility of officially depositing parental lines of EU bred hybrids protected in India in an official database in the EU instead of in India. ESA suggested that instead of giving a specific option to overcome the concerns, they should explore the possibilities of overcoming the concerns of EU breeders.
7. Explore provisions to protect all crop species.
8. Explore the possibility for the India PVP office to visit the CPVO in order to discuss the Quality Audit system as well as visit some examination offices.
9. Explore the possibility to protect varieties for 25 and 30 years in line with UPOV. Peter said there should be some fine tuning on the wording. ****Note that agricultural crops are protected for 6 years, and the horticultural crops for 9 years, and the renewal needs to be done 1.5 years before in order to protect for the maximal time (currently 18 years for horticultural crops)**
10. Benefit sharing: more clarity and harmonization so the provisions in the PPVFR Act are in line with the Biological Diversity Act ITPGRFA.
11. The provisions of the annual fee and the renewal fee need to be reviewed: in other words, to decide if all fees will be fixed, and not a percentage of royalties in addition to fixed fees.
12. ESA requested to add: Explore possibilities to clarify the scope of the provisions on farmers’ rights, [including to define the boundaries of the notion of subsistence farming]. Peter noted that the part in [] is not included either in the Act or in UPOV, and therefore this part was removed.

13. Clarify the provisions of provisional protection in India.