

# Evaluation PVP Development Programme (PVP-Toolbox) 2021 – 2025

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# 1. The Programme

## Origin

In the letter DGA-PAV/ 21125965 dated 03-06-2021, the Ministry for Agriculture, Nature and Food Quality charged Naktuinbouw with the implementation of the PVP Toolbox for the period 01-01-2022 to 31-12-2026. A maximum budget of €230,000 per year (totalling €1,150,000) was made available for this purpose.

This programme built on earlier activities to support countries in their development and implementation of Plant Variety Protection. Following the publication of the book “Framework for the Introduction of Plant Breeders Rights” in 2015, a 5-year PVP Development Programme was initiated in 2016 to be able to rapidly respond to requests from 3<sup>rd</sup> countries for Dutch expertise in the area<sup>1</sup> (see letter DIR/AV/16-009 of April 5, 2016 and the ‘subsidiebesluit’ DGAN-PAV / 16066125 dated 02-06-2016). The Director General writes: “It is my intention to structurally support these activities for a longer period in line with the ambition of the Netherlands to continue playing a leading role in food security and innovation in agriculture and horticulture.”

The programme soon became known as the PVP Toolbox to illustrate the diversity of legal, technical and administrative actions necessary to operationalise an effective national PVP system according to the UPOV system. The financial contribution towards the 2022-2026 programme was granted in 2021 following a report and evaluation of the first PVP Development programme<sup>2</sup>.

## Field of work

The work of the PVP Toolbox focuses on the introduction and implementation of effective protection of Plant Variety Protection in third countries, with specific focus on the global South where the level of protection needs to be raised. Being a Toolbox, it may contain a range of activities and outcomes, depending on the particular needs of the country concerned. This diversity of possible actions was indicated in an annex to the request for the current phase of the Programme:

### - Policy elements

- Development of PVP legislation according to UPOV system;
- Enforcement measures.

### Method of delivery:

- In-country consultations with authorities;
- reception of international Delegations in the Netherlands;

### - Implementation of PVP system (training & operational tools)

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<sup>1</sup> letter DIR/AV/16-009 of April 5 2016 by Naktuinbouw, and the ‘subsidiebesluit’ DGAN-PAV / 16066125 dated 02-06-2016

<sup>2</sup> Raoul Hagens & Laura Piñan González, 2021 Final Report 2016-2021, Plant Variety Development Programme, PVP Toolbox. Naktuinbouw, 19 pp.

Chris van Winden & Kees van Ettehoven, 2019 Evaluation Toolbox Plant Variety Protection (PVP)

- Establishment of a national PVP office;
- Variety examination (DUS, Denomination);
- Enforcement.

Method of delivery:

- DUS training lectures
- Practical DUS training courses
- Naktuinbouw DUS-Helpdesk
- Guest workers at Naktuinbouw
- Training of administrative staff;
- Development of national test guidelines
- Sharing of Calibration books
- Development of reference collections
- IT support (UPOV PRISMA, UPOV e-PVP)

The broad PVP Courses, both the annual International PVP Course in Wageningen (and digital) and local courses cover both policy and implementation aspects.

## Governance

The governance and processes to identify and prioritise activities include a Steering Committee and an Advisory Committee. Projects are identified on the basis of requests from third countries and organisations, often but not exclusively through Royal Netherlands Embassies in the countries. On the basis of these requests, Naktuinbouw prepares an annual plan. Together with the Advisory Committee, consisting of technical experts of UPOV, Dutch Board for Plant Varieties and Plantum, initial priorities are prepared in a consensus document, based on the joint knowledge of the members about developments, interest of users (breeders), and including the Naktuinbouw capacity for implementation.

The Steering Committee, consisting of executives of UPOV, CPVO, FAO and Plantum is responsible for the workplan which is to be endorsed by the funding Ministry. So even though it is a nationally funded programme, implemented by Naktuinbouw, the roles given to UPOV and CPVO allow it to operate in an international framework securing coordination with the activities performed by those international organisations or in conjunction with those organizations.

## 2. Evaluation Methodology

The evaluation process started in February 2025 with the identification of stakeholders and the design of survey questions for the stakeholder groups that would yield maximum feedback on the effectiveness and impact of the programme and its activities. Naktuinbouw was instrumental in distributing the survey and receiving responses during the month of March.

The survey comprised the following substantial questions to assess the impact of the activities:

| PVP Authorities  |
|--|
| <ul style="list-style-type: none"> <li>• How impactful have the Toolbox activity(ies) been (1-10 scale)?</li> <li>• What did you appreciate most about the Toolbox activity(ies)?</li> <li>• What suggestion would you make to improve the Toolbox activity(ies) in future?</li> </ul> |

|   |
|---|
| <ul style="list-style-type: none"> <li>• Did the activity(ies) change your perspective (thoughts) on the role of Plant Variety Protection (PVP)? If so, please explain how</li> <li>• Please specify outcomes that have directly or indirectly resulted from the Toolbox activity (please include the processes, systems, regulations etc. that have been improved as a result of the PVP Toolbox activity(ies))</li> <li>• Have any of the participants of the Toolbox activities been promoted to more senior positions since the Toolbox activity? (please specify their role at the time of the activity and their new role)</li> </ul>   |
| EKN   |
| <ul style="list-style-type: none"> <li>• What did you appreciate most about the Toolbox activity(ies)?</li> <li>• To what extent have your contact with the relevant authorities improved as a result of the Toolbox project(s) (1-10 scale)?</li> <li>• What was your involvement in the execution of the activity(ies) of the PVP Toolbox?</li> <li>• Did the Toolbox project contribute to the knowledge about or the execution of Plant Variety Protection in your working area? If yes, please specify</li> <li>• Are additional activities needed in your working area in the framework of Plant Variety Protection in the near future?</li> <li>• What impacts have you seen from the project in the country or area concerned?</li> <li>• What suggestions would you make to improve the PVP Toolbox projects or general approach for the future?</li> <li>• How likely are you to continue to apply for PVP Toolbox projects?</li> <li>• In addition to the activities related to Plant Variety Protection, Plant Breeders Rights, Enforcement, Variety Release and Registration, would you like to see the Toolbox extended to cover other regulations?</li> <li>• Please specify which activities you would like to see covered and why the PVP Toolbox would be the best way of covering these activities. Please explain your answer:</li> </ul> |
| Naktuinbouw PBR Course participants   |
| <ul style="list-style-type: none"> <li>• Did the course change your perspective (thoughts) on the role of Plant Variety Protection (PVP)? If so, please explain how.</li> <li>• What were your objectives in participating in the PBR course?</li> <li>• To what extent did the course enable you to meet your objectives (1-10 scale)?</li> <li>• What specific challenges does/did your country face in implementing a UPOV-compliant PVP system? To what extent did the course help to address those challenges and how did it help?</li> <li>• How has the course helped your institution advance its PVP goals (e.g., faster registrations, better collaboration with breeders etc.)?</li> <li>• "Are you still in the same role as when you participated in the course? Please specify what your role was at the time of the course, the year of change of your role and what responsibilities you have in your new role now?"</li> <li>• In what way is the information from the course still relevant for you?</li> </ul>   |
| Advisory & Steering Committee   |
| <ul style="list-style-type: none"> <li>• "What did you appreciate most about the Toolbox activity(ies)?"</li> <li>• How impactful have the Toolbox activity(ies) been (1-10 scale)?</li> <li>• What suggestion would you make to improve the Toolbox activity(ies) in future?</li> <li>• Please specify outcomes that have directly or indirectly resulted from the Toolbox activity (please include the processes, systems, regulations etc. that have been improved as a result of the PVP Toolbox activity(ies)):</li> <li>• How does the Toolbox complement the initiatives of your organization?</li> <li>• "In addition to your general feedback on PVP Toolbox, please share how UPOV Prisma has benefitted from the financial support provided by the PVP Toolbox Program?"</li> <li>• In addition to the activities related to Plant Variety Protection, Plant Breeders Rights, Enforcement, Variety Release and Registration, would you like to see the Toolbox extended to cover other regulatory activities related to seed health &amp; quality, seed certification &amp; inspection?</li> </ul>   |

- Please specify which activities you would like to see covered and why the PVP Toolbox would be the best way of covering these activities.

The evaluation team studied documents and workplans/annual reports, and analysed responses to the survey. In addition to the evaluation of the 4-year programme, the evaluators were asked to give recommendations for a possible follow-up and to include possible extension of a toolbox to related seed-regulatory frameworks such as variety registration and seed quality controls.

## 3. Overview of Activities 2021 – 2024

### 3.1 Financial results

The year 2021 was formally part of the first phase of the programme (at least the first 6 months). It was not funded with the full annual amount, and in addition, it was severely affected by the COVID situation. Since that year's projects were not included in the earlier evaluation, these are included in this review.

This phase of the programme built on the earlier period of 4 years, which means that a 'flying start' was possible. An initial total of 19 projects was listed by the Steering Committee in 2021 with 18, 16, 13 added in the subsequent years, with an average budget of 17,000 Euro each. The year 2021 was a special one, both because the full budget of 230,000 was not available and because the COVID pandemic made implementation of many projects during that year impossible. Out of 19 projects, 11 were cancelled. Also in other years, some planned activities had to be altered or postponed, which can be expected in the policy-environments where government priorities change and plans for seminars, meetings and travels need to be amended because of external factors. This experience led to the approval of annual work plans slightly beyond the available budget of 230,000 and included 'reserve projects' to fill gaps when needed. However, starting such a reserve project halfway the year appeared difficult, and in one case (R24-TBX07 Kazakhstan), funds were used, after consultation, in the next year. Apart from the COVID year 2021, the available budget was duly spent on projects despite their sometimes difficult to predict operation during the year. Significant changes at the project level were at times discussed with the Ministry and small over-expenditure at the programme level would be borne by Naktuinbouw according to their own statement when asked. The management costs were higher than the €10,000 originally agreed upon at the start of phase 1 of the programme, which led to the approval of a 60% higher fee over 2024. That decision was supported by the inclusion of the effects of inflation over the years.

Inflation also affected the cost of projects. The decreasing number of projects over the years also illustrate this. Since the current phase of the programme will continue into 2026, we cannot provide a detailed financial overview in this report. However, the available data indicate that the programme is running as planned.

### 3.2. Coverage

The need for PVP assistance can be summarized as follows:

- Non-UPOV members – raising awareness of the benefits of the UPOV system of PVP and training in advance of UPOV membership.
- 1978 Act UPOV members – raising awareness of the benefits of the 1991 Act.

- Existing UPOV members
  - Guidance and training in PVP implementation
  - operational materials and tools
  - awareness raising and training on enforcement measures.

The following map illustrates the extent of UPOV membership:



The PVP Toolbox provided support to the following 25 countries from 2021 - 2024:

|                    |            |                |
|--------------------|------------|----------------|
| Algeria            | Indonesia  | Serbia         |
| Armenia            | Japan      | Suriname       |
| Azerbaijan         | Jordan     | Tanzania       |
| Bolivia            | Kazakhstan | Thailand       |
| Chile              | Kenya      | Turkey         |
| China              | Mexico     | Ukraine        |
| Dominican Republic | Mongolia   | United Kingdom |
| Egypt              | Morocco    | USA            |
| Ghana              |            |                |

Between 2015 and 2024, the Toolbox supported a total of 36 countries.

Support was also provided to UPOV at the international level and regional activities were organized for Africa (meeting with OAPI), Asia (APSA, East Asia), Latin America and the Western Balkans.

The following illustrates the geographic distribution of PVP Toolbox activities:

| Continent | Region | # projects |
|-----------|--------|------------|
|-----------|--------|------------|

|               |           |    |
|---------------|-----------|----|
| Africa        | North     | 7  |
|               | West      | 4  |
|               | East      | 6  |
| Asia          | West      | 12 |
|               | Southeast | 4  |
|               | North     | 5  |
| Latin America |           | 10 |
| Europe        | East      | 9  |

In general, the geographic distribution of activities under the PVP Toolbox reflects the gaps in PVP protection and implementation. However, it also reflects the complementarity of the PVP Toolbox with assistance provided by other resource partners (see Annex 1 and Section 4.4 Analysis: relation with other initiatives in the area). The highest level of support provided by other resource partners is in Southeast Asia (Japan, IP Key SEA, USPTO, China). It is notable – and possibly because of the presence of other support programs, that the PVP Toolbox has organized few activities in that region. By contrast, the PVP Toolbox has engaged in a relatively large number of activities in West Asia, Eastern Europe, Africa and Latin America, where other resource partners are less active.

## 4. Impact Analysis

### 4.1 Feedback from Participants (PVP Authorities)

This section considers the feedback from participants to assess the impact of the Toolbox activities on the basis of the survey (see Section 2 Evaluation Methodology) in accordance with the aims. The activities are diverse but have been categorized as follows in order to assess the impact:

- a) Assisting policy development (non UPOV members or 1978 Act members)
  - i. UPOV 1991 Act PVP law & membership of UPOV
  - ii. Effective enforcement measures
- b) Implementation of law (UPOV members)
  - i. General
  - ii. Technical (Variety examination, including DUS & denominations)
  - iii. Tools & resources
  - iv. Enforcement measures (all)

#### 4.1.1 Assisting Policy Development

Annex 2 provides an overview of projects that seemed to be primarily aimed at supporting policy development or included policy as a part of the project.

##### - [PVP Policy](#)

Supporting the development of government policies is perhaps the most challenging aim of a project and is also diplomatically sensitive, perhaps making it difficult for respondents to be open in their responses. It should also be expected that there will be few concrete outcomes identified by respondents because the

objectives are medium- to long-term in nature. To illustrate this, Nigeria acceded to UPOV in 2025, having received substantial assistance under the first phase of this programme (2016-2021). However, there are clear indications that a number of the projects could be seen to be successful, for example in outcomes or greater awareness of the benefits of PVP (perspective change):

| Country    | Criteria                     | Response  |
|------------|------------------------------|---|
| Kazakhstan | Perspective change           | “Importance of PVP in encouraging innovation and ensuring fair benefits for plant breeders”   |
| Suriname   | Perspective change           | “Expanded my understanding of the legislation much more. The why behind the legislation.”   |
|            | Outcomes                     | “Direct outcome is the Seed bill conform UPOV Convention 1991 that is now at the Parliament.” [sic]   |
| Egypt      | Perspective change           | “Yes”   |
| Serbia     | Perspective change / Outcome | “Better understanding of the role of the PVP, we were introduced to good examples of enforcement of PVP in the Netherlands as well as implemented by certain companies in Serbia. Greater awareness of importance and the role of PVP and practical implementation of PVP.” |

Improving the understanding of the policy aims of PVP is critically important for countries to introduce effective protection of plant varieties and become UPOV members. However, it is also important that officials responsible for PVP in existing UPOV members recognise the importance of PVP policy in order to support the ongoing improvement of enforcement and effectiveness of the system. In that regard, in some activities in existing UPOV members that were not explicitly aimed at policies, the perspective of PVP was improved. For example:

- In Jordan, the Training and Multi-Stakeholder roundtable meeting received feedback from the respondent that the projects provided greater understanding of PVP’s “Role in promoting agricultural biodiversity and encouraging international trade”.
- In URT, the Training of the Plant Variety Protection (PVP) Office in Zanzibar received feedback that “PVP provides confidence in investing in the breeding industry”.
- In Kenya, the project Enhanced plant variety protection system in Kenya, received feedback of “Enhanced understanding of PVP contribution to increase agricultural productivity and its positive impact on the country economy”.

- [Enforcement policy](#)

There were very few projects that explicitly aimed at policies concerning enforcement (e.g. customs measures), with most projects on enforcement concerning the implementation of current policy. The responder from Serbia did report “we were introduced to good examples of enforcement of PVP in the Netherlands as well as implemented by certain companies in Serbia”. Japan reported on a greater understanding of the role of DNA markers for DUS testing and enforcement.

- [Opportunities for Improvement](#)

In terms of suggestions that were related to supporting policy, a suggestion was made to make videos available so that messages could be spread more widely.

### 4.1.2 Supporting implementation

Annex 3 provides an overview of activities that were primarily, or partially, aimed at improved implementation of the PVP law.

There was widespread appreciation of the level of expertise of speakers and trainers and also of the well-structured events. Several participants reported increased knowledge and experience as outcomes of the course.

#### - General

Armenia reported that the activities had directly supported its PVP system design.

Kazakhstan reported that the activities led to the development of clearer guidelines for breeders on intellectual property protection.

Ukraine reported that applicants from the Netherlands had learned more about the procedure for registering varieties in Ukraine.

#### - Variety Examination

Morocco reported that improvements had been made to the processing potato variety evaluation system and to DUS testing, notably the inclusion of disease resistance criteria.

URT reported on the domestication of UPOV Test Guidelines as a result of the PVP Toolbox activities.

Bolivia reported that the activity had enabled it to develop test guidelines for local crops.

Dominican Republic reported that the activity had supported the development of a reference collection of Cocoa varieties.

Kenya provided the following specific feedback on outcomes of the PVP Toolbox activity:

1. Improved process of receipt and verification of DUS applications.
2. Creation of databases for photos and descriptors to facilitate selection of Comparison varieties.
3. Establishment of seed collection
4. Training of plant examiners on search for comparison varieties, scoring and drafting of national TG
5. Establishment of committee of expert to provide their experts as need arises.
6. Engaged with breeders to actively participate in drafting of Test guidelines and related documents

Kenya also reported that, after the activity, the participants were coordinating and training other plant examiners on DUS examination of ornamental and vegetables.

#### - Tools & Resources

The PVP Toolbox projects for tools and resources to support the implementation of PVP related to support for the development of UPOV PRISMA and the UPOV e-PVP Modules. Some DUS-activities also provided Calibration books.

### 4.1.3 Naktuinbouw Course “PBR for Food Security and Economic Development”

The Naktuinbouw PBR course, which has been organized since 1997 combines all aspects related to the introduction and effective operation of the protection of plant varieties. Although the course is not a PVP

Toolbox project per se, the Programme is used to fund participation of selected experts in the course and, therefore, it is relevant to assess to feedback from participants to analyse the effectiveness of the funding. Each course is evaluated with all participants.

The value of submersion courses such as the Naktuinbouw PBR course is often much greater than is realized because of their long-term role in forming personnel that ultimately take on high level and influential positions and in creating networks of PVP advocates. For example, previous Presidents of the UPOV Council were students of the JICA PVP course. To achieve this type of impact, physical participation is an important element.

A PVP Toolbox funded participant from Armenia responded positively on whether the course changed their perspective “Yes, the course provided a broader and more in-depth understanding of the significance of PVP in ensuring food security, economic development, and innovation in plant breeding. Before attending, my perspective was mainly focused on the legal and regulatory aspects, but the course highlighted the direct impact of PVP on breeders’ incentives, sustainable agriculture, and international trade.”

The standard feedback form for the Naktuinbouw PBR course does not provide a question to elicit information on whether the course influenced participants’ perspective on PVP. Including such an item could be very helpful for assessing the impact of the course.

#### *4.1.4 Impact ratings and opportunities for improvement*

The average level of impact reported by participants (PVP Authorities) was exceptionally high, with an average of 9.25 on a scale of 1-10). The individual ratings ranged from 7 (Ghana) to 10 (Dominican Republic, Japan, Jordan, Kazakhstan, Kenya, Mexico, Serbia, Suriname, Ukraine).

Suggestions were made for more practical training and circulation of videos. There were also suggestions to develop an ongoing development program for countries rather than ad hoc projects.

## 4.2 Feedback from Advisory & Steering Committee

### *4.2.1 Outcomes*

#### CPVO

The response from the CPVO identified the following outcomes:

- Strengthening legal frameworks (Suriname, Ghana, Dominican Republic, Kazakhstan)
- Enhancing administrative efficiency (e-PVP, PRISMA, Ghana, Azerbaijan, Ukraine)
- Building technical capacity in DUS and enforcement (Kenya, Armenia, Bolivia, Japan)
- Fostering international collaboration (Chile, Morocco, Japan, Kazakhstan, Mexico, USA)."

A large number of direct and indirect outcomes were reported, including the following:

- Supporting policy (“Strengthening legal and regulatory frameworks”)

The "Train the Trainer" program (APSA, 2021) seems particularly valuable in fostering long-term knowledge transfer, allowing local experts to disseminate PVP principles effectively.

Suriname (2023): the draft Breeder's Rights Bill was screened and refined, leading to improved legal clarity for PVP implementation.

Ghana (2023-2024): assistance in implementing PVP following UPOV membership, leading to clearer administrative structures for handling breeder's rights.

Dominican Republic (2024): strengthened capacities for technical examinations of cacao varieties, improving national PVP enforcement frameworks.

- Implementation ("Improved PVP administrative processes & systems")

Ghana (2024): online PVP administrative training in the Netherlands improved national application processing capabilities.

Azerbaijan (2023): training for PVP office staff strengthened case-handling efficiency and administrative capacity.

Kenya (2024): two experts trained on DUS testing for ornamental crops, improving national technical capacity.

Bolivia (2023): development of national test guidelines for local crops (Chestnut, Açai, Majo, Capua, Cupuaçu), strengthening indigenous crop protection.

- Enforcement

Japan (2022): study visit to the Netherlands on PVP enforcement, leading to adoption of better monitoring mechanisms.

Japan (2024): pilot projects on tomato-resistant markers, potato, and strawberry markers contributed to advanced genetic marker-based enforcement.

Mexico (2021-2023): series of online workshops on ornamental plant PVP enforcement created stronger cross-border cooperation in breeder's rights protection.

Mexico (2022-2023): training on verifying infringements helped enhance the institutional capacity for breeder's rights enforcement.

### Plantum

Plantum reported the following:

"Initiating contacts with more difficult-to-reach authorities, providing a platform for discussions (e.g. webinars with USDA, Ukraine, Mexico) to clarify local requirements and systems by authorities, sharing possibilities around setting up a PVP-office and taking over DUS reports.

It must be said that some projects might not always have clear 'SMART' results but are certainly considered important or successful. In particular projects focusing on countries acceding to UPOV'91 may not have immediate results but could be the spark that eventually leads to UPOV-membership years later. "

### UPOV

UPOV identified the following outcomes:

"Dominican Republic: PVP Toolbox projects enabled establishing the local PVP Office, training of staff and local stakeholders. As a result, new industries were established in the country. For example, 20 new varieties

of table grapes were introduced in the last two years. Another 20 varieties of tomato, blackberry, raspberry and strawberry from foreign breeding programs have been introduced in the same period.

“Armenia, Egypt, Ghana, Nigeria, Tanzania (United Republic): the PVP Toolbox Program was decisive to implement the plant variety protection offices of most of the new members of UPOV. The capacity building programs developed in these countries supported the entry into operation of the PVP offices; trained local staff and relevant stakeholders (e.g. plant breeders and seed growers).”

“South America: Bolivia and Chile: the activities developed with UPOV members under the 1978 Act of the UPOV Convention were instrumental to demonstrate what are the benefits of joining the 1991 Act for the local communities in those countries. In particular, in Bolivia, the development of national test guidelines for crops of local importance was instrumental to increase support for the system among local stakeholders.”

This list is non-exhaustive. Other benefits can be described accruing from other projects, as required.”

#### Dutch Board for Plant Varieties

The Dutch Board for Plant Varieties reported that "Difficult to answer this concretely. However, I do see enthusiasm, engagement, and a willingness from the participants to apply what they have learned in their own countries."

#### *4.2.2 How does the Toolbox complement the initiatives of your organization / [other organizations]?*

##### CPVO

The CPVO reported that the PVP Toolbox complements the initiatives of the Community Plant Variety Office in several key ways, particularly in terms of capacity building, regulatory alignment, and technical expertise.

The aspects that were noted include:

“CPVO ensures compliance with UPOV 1991 standards within the EU and promotes legal harmonization of PVP regulations across member states. It works with European policymakers to refine national PVP frameworks based on EU best practices.”

“The Toolbox helps non-EU countries (e.g., Ghana, Kazakhstan, Suriname) align their legal frameworks with UPOV 1991, making them more compatible with CPVO regulations.”

“The PVP Toolbox helps standardize digital application systems globally, ensuring non-EU countries can integrate with CPVO’s digital PVP framework in the future.”

##### Plantum

"The framework of the Toolbox allows for many smaller projects to be organized. Despite the fact that the projects are short and have a small budget, they often serve as a jumping-off point for larger initiatives or results. An example is Kazakhstan which, after a series of small projects, has made tremendous progress towards UPOV'91 membership.

The same is true for improving and harmonizing practices among existing UPOV-members. the Toolbox gives Dutch experts and authorities such as Naktuinbouw the opportunity to initiate closer contacts with fellow UPOV-members and improve cooperation. UPOV itself generally does not actively promote harmonization as much as internationally operating companies would sometimes like. This makes the work of the Dutch government in filling this 'void' very important to Dutch business."

## UPOV

UPOV reported that “The projects are impactful due to being coordinated among strategic partners. Their focus is in line with UPOV priorities to expand the system to new areas and support increasing efficiency in new UPOV members. The selected projects potentialize ongoing initiatives of UPOV and UPOV members, such as the European Union (IP Key projects).”

UPOV also reported that "The functionalities developed with financial support of the PVP Toolbox enabled the Netherlands (Kingdom of) to receive PVP applications through UPOV PRISMA for all genera and species, including applications for national listing (NLI). Most of these same functionalities are now used by OAPI, Kenya, Mexico, Peru, Serbia, South Africa, Türkiye, Uruguay and Viet Nam. Among these, Türkiye will soon complete the use of UPOV PRISMA for NLI applications.” and “The stable support over the years was key to bring UPOV PRISMA closer to a cost-recovery condition, expected by 2027. "

## Dutch Board for Plant Varieties

The Dutch Board for Plant Varieties reported that "Some activities of the toolbox align with the activities of the NL PVP Office (plant breeders' rights, registration). In this sense, the Council also learns and benefits from the toolbox activities by participating in them."

### *4.2.3 Impact ratings*

The average level of impact reported by members of the Advisory & Steering Committee was high, with an average of 8.4. The individual ratings ranged from 7 (former Plantum member, Dutch Board for Plant Varieties) to 9 (CPVO, Plantum, FAO, UPOV).

### *4.2.4 Opportunities for Improvement*

#### - Keep doing

##### **Plantum**

Plantum noted that "The framework of the Toolbox allows for many smaller projects to be organized. Despite the fact that the projects are short and have a small budget, they often serve as a jumping-off point for larger initiatives or results. An example is Kazakhstan which, after a series of small projects, has made tremendous progress towards UPOV'91 membership. The same is true for improving and harmonizing practices among existing UPOV-members. The Toolbox gives Dutch experts and authorities such as Naktuinbouw the opportunity to initiate closer contacts with fellow UPOV-members and improve cooperation. UPOV itself generally does not actively promote harmonization as much as internationally operating companies would sometimes like. This makes the work of the Dutch government in filling this 'void' very important to Dutch business."

#### - For Enhancement

##### **CPVO**

The CPVO identified the following means to enhance the effectiveness of the Toolbox activities:

1. Strengthen practical, hands-on training: more in-country DUS trials & testing facilities: while online training is beneficial, practical field training would provide stronger skill development; consider establishing pilot DUS trials in collaboration with local institutions; regional training hubs: set up regional centres for in-person capacity building (e.g., in Africa, Latin America, and Asia) to reduce travel costs and improve accessibility for participants.

2. Expand digital and E-learning solutions: interactive e-learning modules: develop multilingual (English, French, Spanish, Arabic) self-paced e-learning courses on PBR enforcement, application processes, and DUS testing; case study-based learning: provide real-world examples of successful PVP implementation and enforcement in different agricultural sectors.

3. Enhance policy & legal support: legislative assistance: many countries struggle with drafting and enforcing breeder's rights laws. Expand technical and legal advisory services for governments and regulatory bodies; regional legal frameworks: encourage harmonized PVP laws across regions (e.g., ECOWAS in Africa, ASEAN in Asia, or MERCOSUR in Latin America).

4. Strengthen private sector & breeder involvement: more engagement with breeders: organize dialogue sessions with plant breeders, seed companies, and researchers to identify gaps in PVP implementation, PPP (Public-Private Partnerships): encourage collaborations between government agencies, research institutions, and private breeding companies to enhance PVP adoption.

5. Improve enforcement & compliance support: train national enforcement agencies: work more closely with customs, plant variety protection offices, and judicial authorities to improve enforcement against infringements; technology for enforcement: promote DNA fingerprinting & marker-assisted tools (as seen in Japan's 2024 initiative) to detect unauthorized variety use.

6. More cross-country exchanges & networking: regional peer-learning workshops: countries at similar PVP development stages could exchange experiences and best practices (e.g., Ghana & Kenya, Bolivia & Mexico); mentorship programs: experienced PVP offices (e.g., Netherlands, Japan) could mentor emerging ones through structured collaborations."

### **Plantum**

Plantum reported that "We consider the Toolbox a cost-effective tool to effect changes in, and initiate dialogues with many jurisdictions. PVP is one of the major considerations of companies when deciding on expanding onto new countries/regions, but it is not the only one." "Broadening the scope of the PVP-toolbox to also allow for the more consistent incorporation of topics such as plant health, variety release, VCU, etc. could greatly add to the effectiveness of the Toolbox." This would however require an increased budget for the Toolbox-team to allow for more or more comprehensive projects."

- [Activities you would like to see covered and why the PVP Toolbox would be the best way of covering these activities.](#)

### **Plantum**

Plantum explained that "PVP is not a goal in itself, but one aspect which is considered when investments are made. Broadening the scope of the PVP-toolbox to also allow for the more consistent incorporation of topics such as plant health, variety release, VCU, etc. could greatly add to the effectiveness of the Toolbox. This solves the current 'risk' of PVP being regulated perfectly in a jurisdiction, but investments staying low due to deficiencies in other areas."

Judith de Roos (former Plantum Advisory Committee of the PVP Toolbox) reported that "For those countries where plant material needs to be sent as requirement for either the PBR or variety listing procedure the authorities often do not understand how difficult it is to arrange for import permits for the plant material and arrange for custom clearance an PEQ quarantine upon arrival. It would be helpful if such issues could be part of the project scope."

## 4.3 Feedback from EKN

The Agricultural Offices at the Royal Netherlands Embassies play an important role in identifying needs and opportunities for the development or improvement of PVP in their respective countries. They can submit project proposals, which are reviewed by the advisory board and steering committee in the preparation of the annual plans. A response was obtained from fifteen countries, which indicates the importance and appreciation of the work. The embassies report a great interest in the topic and a personal involvement in various aspects of the project execution and follow-up. In Chile, for example, the embassy organized a lunch with the relevant stakeholders following a Toolbox initiative, albeit without the desired results because of political opposition to upgrade the PVP system to the 1991 Act of UPOV.

### 4.3.1 Outcomes

When asked whether the projects had increased knowledge and further discussions in their respective countries, all respondents were positive, ranging from “yes”, “sure” to “absolutely”. Several stressed, however, that the processes take time to actually generate policy change and implementation capabilities, indicating caution against high expectations of quick impact. As Kazakhstan reports: “The Embassy clearly saw (in discussions with professional contacts and in local media) the spark of the internal political dialogue on the subject of UPOV membership and PVP issues”. Some stressed that it can be productive to have follow-up projects in the same country.

An added outcome is that all respondents value the positive impact that the Toolbox projects have had on the relation with relevant authorities in their countries, which proves helpful also for discussing other dossiers. Example Kenya: “I appreciated the fact that we had an instrument/tool that we could use under the Kenya Netherlands agriculture working group to enhance our cooperation and collaboration.”, and Egypt: “It is a great instrument for diplomacy”.

### 4.3.2 Ratings for improved contacts with relevant authorities

The average level of satisfaction reported by EKN for improved contacts with relevant authorities was high, with an average of 8.4. The individual ratings ranged from 6 (Kazakhstan) to 10 (Mexico). All respondents, except one, indicate that they are interested to propose other projects in the coming year(s). The one that was not keen was Turkey, indicating that the system works very well there. India linked its response with the Seed Secretariat, a coordination unit in India, developed under the SeedNL programme.

### 4.3.3 Suggestions for improvement

#### - Small-project based programme:

“Develop a multi-year strategy, so that it is not a project-by-project decision process.” (Egypt, Jordan), or as Serbia formulates: “make multiannual programs rather than trying to cover everything. Risk is that you'll be spread too thin and effectively make less of an overall impact. In the Western Balkans we made a great first step, but as there is no funding for any follow-up, chances are that we are not bringing about structural change.”

“For the sustainability of the training PVP should consider having as a mandatory requirement for the institution (..... to report on) the progress after 6 months, then 1 year etc. In the case of KEPHIS the training was valuable but for some steps they indicate that resources are needed to implement some of the changes.”

#### Broadening the scope:

URT: “. . . broaden the support areas within the seed sector like health, inspection etc.” Chile: “seed quality & health seem specifically interesting to Chile as they have very strict import regulations.” “In Kazakhstan, ensuring high-quality seeds and a transparent certification system is essential for agricultural development.”

However, warnings: “For us seed certification and inspection would be really interesting, but the systems (Dutch and Mexican) are very different, so it would be kind of complex.” And “I think further widening the scope risks diverging efforts at the cost of the overall instrument.” (Serbia)

## 4.4 Coordination with other initiatives

The PVP Toolbox is not the only initiative supporting the development and operation of the protection of plant varieties. PVP may be part of general seed system support programmes, such as AGRA (main funders Gates Foundation/Mastercard Foundation/USAID) and other such broad development programmes. More specifically, focusing on PVP internationally, there is the work of UPOV and the EU programmes (e.g. IP Key, CarIPI, AfrIPI, AL-INVEST PI, TAIEX), coordinated by the Community Plant Variety Office. At the national level, there are programmes by Japan, USA, China, Rep. of Korea and others (see Annex 1).

In The Netherlands itself, there is the Seed Law Toolbox and two Flagship programmes by SeedNL along with the PVP-programme by Naktuinbouw. Wageningen UR further implements several seed sector development projects, which sometimes have a seed policy component.

Coordination of PVP-Toolbox activities is done vigilantly. Important international organisations providing PVP support are represented in the Advisory and Steering Committees, thereby ensuring close collaboration and coordination of activities. Complementarity and avoidance of duplication are a major consideration in all projects. One example is provided from November 2023, when the Netherlands Agricultural Counsellor in Thailand proposed a project for 2024 to enhance the understanding of the benefits of the UPOV convention among smallholder farmers, regulators, breeders, and key stakeholders in the seed industry in the country. While the steering and advisory committees responded very positively, recognizing the significance of the proposed activities for Thailand. It was decided to integrate it with the IP KeySEA program thereby preventing duplication of activities across different European programs.

Another example of the complementarity of the PVP Toolbox is in funding selected participants to the Naktuinbouw PBR course to complement other PVP Toolbox activities.

Coordination with SeedNL also appears to work quite well. The Toolbox input in Nigeria (in the first phase of the programme) was done in the framework of the large programme initiated by SeedNL. Unlike the PVP Toolbox, SeedNL initiates and supports larger scale programmes within the ISSD principles, which looks at seed systems in an integrated way both in terms of the development of individual seed systems and the various interrelated regulatory issues from variety registration and seed quality to PVP, genetic resource rights and, where applicable, biosafety. SeedNL reported that whenever PVP comes up, Naktuinbouw is involved.

Complementarity also exists where PVP Toolbox supports the development of UPOV e-PVP, notably UPOV PRISMA, on the basis that this provides practical assistance for the implementation of the UPOV system while also increasing the efficiency of the UPOV system for all UPOV members. In most instances, the funding is provided as a general fund, although in other cases funding has been provided for a particular project for a country to join UPOV PRISMA. In addition to supporting individual countries, the degree of success of UPOV e-PVP for the UPOV system will depend on maximizing the uptake of UPOV e-PVP by as many countries as

possible. In that regard, encouraging the use of UPOV e-PVP by new and recent members before they develop their own system could be a wise target for the PVP Toolbox as part of an overall country program.

## 5. Evaluation of Impact Analysis

### 5.1 Outcomes

The PVP Toolbox activities did not explicitly specify the expected outcomes (see Recommendations below), although this could be inferred from the nature of the activities. Further, it must be stressed that the impact of the programme is difficult to assess in isolation. At the regulatory level, Ghana and Armenia became party to the UPOV 1991 Act in 2021 and 2024 respectively and Nigeria in 2025. This cannot be attributed solely to the programme because these are decisions taken by sovereign nations in a wider context, but a positive impact can certainly be attributed to the Toolbox (and its predecessors) in facilitating those decisions. The impact on PVP administration and examination and PBR enforcement measures can be more directly attributed to PVP Toolbox capacity-building activities and support for practical resources, although there are no objective data to quantify the impact beyond the survey results. Another form of impact was the recognition of The Netherlands' expertise in PVP expertise and the Dutch seed sector in general, which enhances the influence of the Netherlands in country policy. This is illustrated by the number and level of visits to the Netherlands seed sector and Naktuinbouw in particular in which the topic of PVP is explicitly included.

#### *Government Policy*

- [PVP](#)

For activities where the apparent aim was to influence PVP policy, Suriname was a striking example of success, with a reply that a “Direct outcome is the Seed bill conform UPOV Convention 1991 that is now at the Parliament”, although the compliance has not yet been assessed by UPOV. However, such activities are often expected to achieve effects only in the medium- and long-term by fostering advocates for the UPOV system of PVP, rather than by providing a “magic bullet”. There were good indications that the PVP Toolbox activities were successful in this regard, with participants from Kazakhstan, Suriname, Egypt and Serbia reporting a positive change of perspective on PVP as a result of the activities.

Improving the understanding of the policy aims of PVP is critically important for countries to become UPOV members. However, it is also important that officials responsible for PVP in existing UPOV members understand the importance of PVP policy in order to support the ongoing effectiveness of the system. In that regard, in some activities in existing UPOV members that were not aimed at supporting policy development, the perspective of PVP was improved, including Jordan, URT and Kenya.

- [Enforcement](#)

Effective enforcement is a major factor for PVP to achieve the intended impact. Few of the PVP Toolbox activities were aimed at improving policies on enforcement measures (e.g. customs measures).

- [Implementation](#)

Training courses and study visits formed the basis for capacity-building in countries to enable the PVP system to operate effectively. Assessing the impact of such activities can be challenging as far as the enhancement of people skills is concerned but there were clear indications that the PVP Toolbox activities were achieving significant impact. Notable examples included Armenia reporting that the activities had directly supported its

PVP system design, URT domesticating UPOV Test Guidelines and Kenya reporting a number of specific and valuable outcomes. Kenya also reported that, after the activity, the participants were coordinating and training other plant examiners on DUS examination of ornamental and vegetables.

In some cases (e.g. Bolivia, Dominican Republic), outcomes related to the examination of local crops. At first sight, such activities might not be seen to be delivering beneficial outcomes for Dutch breeders; however, such activities may be beneficial in increasing the appreciation of PVP. It would be beneficial to identify such objectives and assess whether the aims are being met.

In relation to enforcement, Japan reported a greater understanding of the role of DNA markers for DUS testing and enforcement.

## 5.2 Complementing and Contributing to Other activities

The Toolbox is not alone in the PVP-development sphere, with a number of organizations and countries providing support for the development of PVP. The PVP Toolbox is, however, unique in the PVP sphere in terms of the governance of the funds (Advisory and Steering Committees) and flexibility of approach. The key organizations (UPOV, CPVO) that also have their own PVP-support mechanisms, are represented in the Advisory and Steering Committees, thereby ensuring close collaboration and coordination of activities. This provides the PVP Toolbox with a unique capacity to achieve maximum impact from its activities by building on the activities of others and also the capacity to maximize the impact of others' activities by complementing any gaps.

## 5.3 Impact Ratings and Suggestions for Improvement

The PVP Toolbox activities achieved exceptionally high levels of impact satisfaction from the target countries and were also highly rated by the Advisory & Steering Committee members and the agricultural offices at the Royal Netherlands Embassies, both in terms of the variety of activities and outcomes. Therefore, the suggestions for improvements to the PVP Toolbox activities mentioned by the respondents should be seen in that context; in other words, the suggestions are intended to further improve a program that is already working very well rather than suggestions for a radical change of approach.

Several suggestions could be implemented within the current set-up, such as activities with physical and “hands-on” participation, “more legislative assistance” and “increase activities in the area of enforcement”. Similarly, a call for more attention towards acceptance of DUS reports from other UPOV countries as opposed to focusing mainly on DUS-testing in each country, can be included. Furthermore, the development and sharing of videos and e-training courses could be considered within the current framework. Similarly, a call for the more direct involvement of the private sectors could be accommodated.

Some suggestions, such as the call for longer-term commitment in the cooperation with countries, a regional hub and widening the scope of the Toolbox beyond PVP, would require a radical review and some changes to the governance:

- *Longer-term commitment*

The programme tends to support a wide range of relatively small-scale, specific activities based on needs in a country at a particular moment. The current approach has the unique advantage of catalysing developments

through smart timing and also filling unforeseen gaps in other programs. It also positions Naktuinbouw and the Netherlands as the go-to-party for quick and responsive action across a large number of countries.

Some respondents indicated that a longer-term involvement in the process towards UPOV membership or increased effectiveness of implementation would be beneficial. The current approach does have the seeming disadvantage that systematic support for lengthy regulatory processes or improvement of operational implementation PVP systems is not provided. However, such longer-term involvement would sacrifice the flexibility of the programme to address pressing needs through the annual prioritization process. Moreover, longer term programmes that may include PVP are already provided by other parties in the Netherlands, through RVO and development programmes by the Royal Netherlands Embassies. Adopting such an approach for the PVP Toolbox would require complex and challenging coordination with other partners, well beyond the arrangements through the current governance, and would undoubtedly reduce the possibility to support as many countries as the current approach. We thus suggest to keep the focus of PVP Development Programme on small projects that can be planned and implemented flexibly, and which could serve as ‘seed money’ for the development of longer-term presence in selected countries to be funded from other sources.

### *Regional initiatives*

A suggestion was made to increase region-wide initiatives, including:

- regional training hubs: set up regional centres for in-person capacity building (e.g., in Africa, Latin America, and Asia) to reduce travel costs and improve accessibility for participants.
- regional legal frameworks: encourage harmonized PVP laws across regions (e.g., ECOWAS in Africa, ASEAN in Asia, or MERCOSUR in Latin America).
- more cross-country exchanges & networking: regional peer-learning workshops: countries at similar PVP development stages could exchange experiences and best practices (e.g., Ghana & Kenya, Bolivia & Mexico);

While there could be advantages in supporting regional organisations/initiatives, we consider that the Toolbox should continue to provide small-project support, because more substantial presence would require considerable additional organization and administration with the associated costs in terms of time and financial resources. This would undoubtedly compromise the flexibility of the current approach. It is important that regional PVP mechanisms (OAPI, ARIPO, SADC) for such regional initiatives be led from within the region, rather than led by the Netherlands.

### *Expanding the scope of the PVP Toolbox*

Some respondents to the survey observed that the development of effective commercial seed systems requires more than just effective PVP. Other elements noted were: i) variety registration; ii) seed quality control; iii) seed certification; and iv) phytosanitary controls. In addition, biodiversity and biosafety regulations could equally be added. This observation is fully supported.

At first sight, taking a more holistic approach to seed regulatory issues seems an attractive approach but consideration would need to be given to the full range of implications for the Toolbox, including:

- Other components of seed systems are often governed by other legislation with much lower levels of international harmonization than PVP, leading to much more complexity (even controversy) in providing advice. The different systems are also often operated by different government departments, or at least personnel, meaning that apparent economies of effort would not be realized and may rather introduce

disproportionate levels of complexity. Demonstrations of this can be seen where more than one government department's involvement in PVP has frequently led to a block on progress.

- Significant additional funds would be needed for the work to be done on other seed regulatory elements and for the additional administration and coordination, requiring a longer time-span of involvement with the particular country (see below)
- Programs for other seed regulatory systems are provided by parties other than the PVP organizations involved in the PVP Toolbox, which would pose an added complexity in terms of programme governance. To achieve the same level of synergy as for the PVP program a much broader composition would be required for the Steering Committee and Advisory Committee
- Unless the funding was increased to another scale level, the Netherlands would no longer be able to assist on demand and influence the same number of countries as now.

The close relationship between PVP and variety registration (National listing) as far as DUS examination is concerned could more easily lead to a limited expansion of the remit of the PVP Toolbox to variety registration, but only with regard to the establishment of the identity of the new variety. Adding VCU requirements would, however pose a major challenge because of the lack of international harmonization on VCU. A number of OECD members have no VCU testing requirement and there are variations between countries on the crops for which VCU testing is required.

Although the different seed regulations have an important role to play in enabling a thriving commercial seed sector, it is worthwhile to recall the fundamental distinction between PVP, which is unique in providing an economic incentive for innovation, and other regulations that are aimed at regulating the market. Alongside the high degree of international harmonization of PVP in contrast to other systems, it is clear that PVP is ideally disposed to the PVP Toolbox approach and incorporating any other systems would entail a fundamental revision of the modus operandi. It is also questionable whether the impact of work on the other systems would justify the financial and personnel resources this would entail. Any such consideration should only be after a full risk-benefit analysis is conducted with a particular focus on outcomes that could be achieved. We consider, at this moment, that a more integrated approach to other regulatory frameworks affecting seed systems should be left to other programmes/operators

## 6. Conclusions

The PVP-Programme has implemented a large number of projects during the period under review with very high satisfaction scores by all stakeholders. The programme has an effective governance and benefits from a high level of flexibility in steering initiatives to achieve maximum impact. All this has been largely done within the financial boundaries set at the start.

An effective PVP system is essential for commercial seed sector and overall economic development by providing rights to breeders, both those in the private and public sectors, but is still lacking in large parts of the world. The PVP Toolbox has provided a uniquely effective means of advancing PVP in many countries and should be continued for the future.

In the following chapter, the suggestions made in the survey and analysed in this report have been translated into a set of recommendations to further develop and improve the programme.

## 7. Recommendations

### **Recommendation 1: (Continue the programme)**

It is recommended to prepare a further phase of the programme with an extension of 10 years with a go-no-go decision after 5 years, similar to the first phase.

### **Recommendation 2: (Governance)**

It is recommended to maintain the current governance (Advisory & Steering Committee) and PVP Toolbox approach, which is highly appreciated and has delivered important outcomes.

### **Recommendation 3 (Coordination with other parties)**

At the international level, it is recommended to continue all efforts to ensure that the Advisory and Steering Committees, requesting authorities and requesting embassies continue to support the programme and ensure coordination with their other programmes.

At the national level, it is recommended to ensure close coordination with SeedNL in order to explore synergies and increase understanding of PVP. Consideration should be given to inviting a SeedNL representative to join the Advisory and Steering Committees (see also Recommendation 10 with regard to meeting with SeedNL).

### **Recommendation 4 (Clarify aims and assess outcomes accordingly)**

The effectiveness of the PVP Toolbox programme could be enhanced by clarifying the intended aims of each activity (PVP Toolbox activities and activities partially funded by PVP Toolbox, e.g. PBR course, UPOV e-PVP support). This should be combined with short, end of activity evaluation questionnaires to assess the immediate impact, followed by an end of (5-year) term evaluation questionnaires to assess actual outcomes. This approach would allow the PVP Toolbox to use the feedback to enhance the programme activities.

Such an approach would provide clarity on the aim of each activity. For example, supporting an activity for the development of local test guidelines would probably not be seen as a priority for the PVP Toolbox unless the aim was to increase the appreciation of PVP in a particular country, so the activity might be linked to ensuring that the country publicized the project and value to the country.

The questionnaires developed for this evaluation (see Chapter 2. 2. Evaluation Methodology) would provide a suitable basis for the questionnaires.

### **Recommendation 5 (Country profiles)**

A major advantage of the PVP Toolbox is the flexibility to provide one-off activities according to need and this should be preserved. However, to enhance the value of such activities, and in conjunction with **Recommendation 4 (Clarify aims and assess outcomes accordingly)** it would be valuable to verify that such activities are consistent with the steps to achieving an effective PVP system. Therefore, it is recommended to establish a profile of steps for countries to ensure that each activity is consistent with the overall goal and will complement other initiatives. Such steps would include:

1. Awareness-raising (policy makers, farmers, companies, lawyers etc.)
2. UPOV 1991 Act PVP law
3. Effective enforcement measures
4. PVP Office and administration
  - Use of UPOV e-PVP
5. Variety examination procedures

#### **Recommendation 6 (Physical participation)**

It is recommended to recognize the greater impact of activities with physical participation while acknowledging that this incurs substantially increased cost. Therefore, activities with physical participation could be used for activities targeting individuals in key positions (e.g. policy makers for study tours, trainers for administration and examination roles). Furthermore, consideration could be given to organizing the Naktuinbouw PBR course in both virtual and physical forms (see Section 4.1.3 Naktuinbouw Course “PBR for Food Security and Economic Development”).

#### **Recommendation 7 (Increase outreach)**

It is recommended to increase the outreach of activities by:

- Making presentations available to non-participants
- Translating key information (e.g. FAQs, myth busting) in local languages in cost effective way by using machine translation tools with basic editing checks, combined with a disclaimer

#### **Recommendation 8 (Private sector involvement)**

It is recommended to take a conscious decision for each activity on whether / how to involve the private sector (local and international) in project planning and implementation.

#### **Recommendation 9 (Topics)**

The PVP Toolbox should increase its consideration of the following aspects of PVP:

- Enforcement measures and tools
- DUS examination policy – to reduce the number of duplicated DUS tests across UPOV members, thereby reducing costs and delays in granting of PBR
- Encourage use of UPOV e-PVP by all countries

#### **Recommendation 10 (Extending the scope beyond PVP)**

It is recommended that the scope of the PVP Toolbox is not extended beyond PVP with the exception to more explicitly including PVP aspects in other regulations such as combining DUS-rules for national listing and protection, and avoiding import restrictions for research samples for DUS-testing. In order to put the Toolbox in the frame of the wider seed regulatory issues, it is recommended to intensify the coordination with other relevant initiatives such as SeedNL and to optimally use the PVP knowledge and experiences of the PVP Toolbox team in their programmes.

#### **Recommendation 11 (Financial considerations)**

When extending the programme to a next phase, care should be taken to avoid monetary inflation diminishing the value of the programme in real terms. It is recommended that the 'purchasing power' of the programme be brought in line with that at the start of the programme in 2016.

ANNEX 1

INTERNATIONAL ASSISTANCE FOR UPOV SYSTEM OF PBR

This section considers the countries and organizations that are providing assistance for the UPOV system of PBR and how this is coordinated.

**Netherlands**

(See main document: Section 4.4)

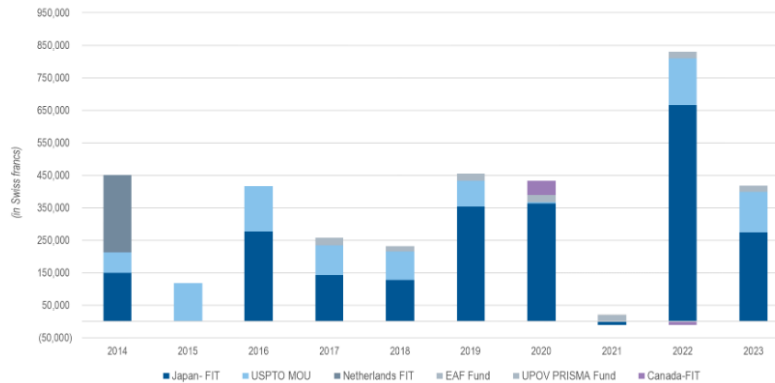
**UPOV**

|                   |  |
|-------------------|--|
| Funds             | <p>Regular budget (2024-25) for Travel, Training = CHF150,000:</p> <p>Staff missions: CHF 145,000 (CHF 72,500 / annum)<br/>         Third Party Travel: CHF 5,000 (CHF 2,500 / annum)</p> <p>Extrabudgetary funds (see Japan, USPTO, Toolbox &amp; chart below)</p> <p>Total / annum: CHF 420,000 (26pprox.. average 2021-23)</p>  |
| Target countries  | <p>The priority for providing assistance by the Office of the Union is as follows:</p> <p>(8) assistance to existing members of the Union;</p> <p>(ii) assistance to States and certain organizations that are not members of the Union, particularly governments of developing countries and countries in transition to a market economy, in the development of legislation in line with the 1991 Act of the UPOV Convention and their accession to the UPOV Convention;</p> <p>and</p> <p>(iii) assistance to States and certain organizations that are not members of the Union, in the implementation of legislation that has received a positive decision of the Council, according to their commitment to accede to the UPOV Convention.</p> |
| Raising awareness | <ul style="list-style-type: none"> <li>• UPOV staff missions under regular budget and extra-budgetary funds (see Japan &amp; USA)</li> </ul>   |
| Training          | <ul style="list-style-type: none"> <li>• UPOV Distance Learning courses &amp; through extra-budgetary funds (see Japan &amp; USA)</li> </ul>   |
| Operational tools | <ul style="list-style-type: none"> <li>• UPOV e-PVP is offered to all UPOV members</li> </ul>  |

**Funds-in-Trust (extrabudgetary funds)**

The overall evolution of the actual income of the Funds-in-Trust for the period from 2014 to 2023 is shown below in Chart 4. It should be noted that the contribution for FIT Japan relating to 2021 was received in 2022.

**Chart 4. Evolution of Funds-in-Trust from 2014 to 2023**



(Source)

**Japan**

|                   |   |
|-------------------|---|
| Funds             | Japan FIT: CHF 310,000 / annum (27pprox.. average 2021-23)<br>MAFF funding: value of fund unknown<br>JICA training course: value of fund unknown  |
| Target countries  | Japan FIT / MAFF: South East Asia<br>JICA training course: Countries who have not established yet but will prepare Plant Variety Protection (PVP) system in accordance with the UPOV Convention and will achieve the examination method complied with the international standard for registration of new plant varieties (see <a href="https://www.jica.go.jp/english/overseas/philippine/activities/_icsFiles/afieldfile/2024/12/20/KCCP_GRF_2024_List.pdf">https://www.jica.go.jp/english/overseas/philippine/activities/_icsFiles/afieldfile/2024/12/20/KCCP_GRF_2024_List.pdf</a> ) |
| Raising awareness | <ul style="list-style-type: none"> <li>• East Asia PVP Forum (EAPVP Forum) meetings and associated activities (see <a href="http://eapvp.org/report/">http://eapvp.org/report/</a>)</li> <li>• Activities under UPOV JP-FIT</li> <li>• JICA course “Introduction of Plant Variety Protection (PVP) System and Utilization of New Improved Varieties and High Quality Seeds for Agriculture and Rural Development”</li> </ul>  |
| Training          | <ul style="list-style-type: none"> <li>• JICA course “Introduction of Plant Variety Protection (PVP) System and Utilization of New Improved Varieties and High Quality Seeds for Agriculture and Rural Development”</li> <li>• East Asia PVP Forum (EAPVP Forum) activities (see <a href="http://eapvp.org/report/">http://eapvp.org/report/</a>)</li> </ul>  |
| Operational tools | <ul style="list-style-type: none"> <li>• n/a</li> </ul>   |

## European Union

|                  |  |
|------------------|--|
| Funds            | IP Key, CarIPI, AfrIPI, AL-INVEST PI (Mercosur countries), TAIEX   |
| Target countries | IP Key China China,<br>IP Key LA Latin America<br>IP Key SEA ASEAN countries<br>CarIPI Caribbean<br>AfrIPI Africa<br>AL-INVEST PI Mercosur countries<br>TAIEX All low and middle-income partner countries and regions covered by the Directorate-General for International Partnership (INTPA) |

| Country/Organisation | Project/<br>Initiator | Format     | Main topic               | Title  |
|----------------------|-----------------------|------------|--------------------------|--|
| NCSS, NARO           | TAIEX                 | Presential | Capacity building        | Expert mission on EU-Japan cooperation on plant breeder rights                         |
| Latin America        | IPKey LA              | Online     | Enforcement              | Webinar on enforcement of PVRs   |
| South East Asia      | IPKey SEA             | Hybrid     | UPOV 1991                | Open seminar on the benefits of UPOV 1991 and debunking myths                          |
| Indonesia            | IPKey SEA             | Presential | UPOV 1991                | Closed workshop on PVR System implementation in the framework of UPOV 1991 – Indonesia |
| Thailand             | IPKey SEA             | Presential | UPOV 1991                | Closed workshop on PVR System implementation in the framework of UPOV 1991 – Thailand  |
| Latin America        | AL-INVEST             | Online     | Licensing                | Advanced webinar on Licensing of PVRs for Universities and public institutes           |
| China                | IPKEY CHINA           | Presential | Legislative developments | High level study visit in Europe of a delegation from MARA, NFGA, SPC (Supreme Court)  |

| Country/Organisation | Project/<br>Initiator | Format     | Main topic        | Title                                  |
|----------------------|-----------------------|------------|-------------------|--|
| Chile                | TAIEX                 | Presential | Capacity building | TAIEX DUS training for Chile Officials |

| Country/Organisation | Project/<br>Initiator | Format     | Main topic  | Title   |
|----------------------|-----------------------|------------|-------------|---|
| Colombia             | TAEIX                 | Presential | DUS         | TAEIX Colombia Study Visit to the Netherlands – focus on cannabis and roses |
| China                | IPKey China           | Online     | DUS         | DUS Training to Chinese officials   |
| China                | IPKey China           | Presential | QAS         | Evaluation of the activities of the Mushroom testing institute of Shanghai  |
| Colombia             | IPKEY LA              | Presential | Enforcement | Enforcement Seminar for the Andean Community judges and prosecutors         |

## USPTO

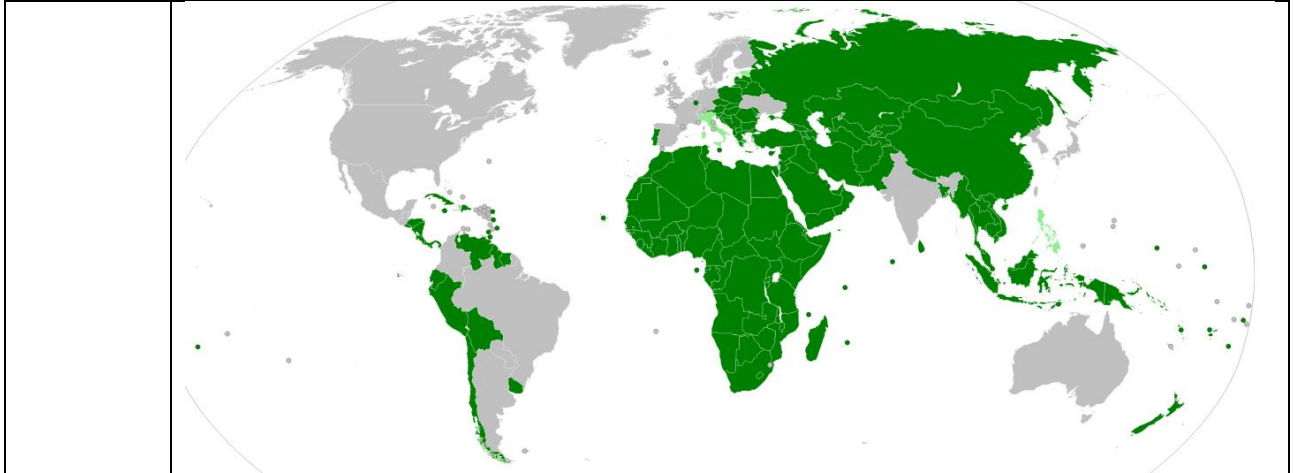
|                   |  |
|-------------------|--|
| Funds             | USPTO-UPOV Agreement: CHF 140,000 / annum (29 approx.. average 2022-23)  |
| Target countries  | According to UPOV and USPTO priorities   |
| Raising awareness | <ul style="list-style-type: none"> <li>• UPOV Train the Trainer / UPOV Executive Program</li> <li>• Meetings, seminars etc.</li> </ul> |
| Training          | <ul style="list-style-type: none"> <li>• UPOV Workshop for Laws</li> </ul>   |
| Operational tools | <ul style="list-style-type: none"> <li>• n/a</li> </ul>  |

## Republic of Korea

In the past, the Korean Seed & Variety Service (KSVS) and Korean International Cooperation Agency (KOICA) jointly organized an in-person “Training Course on Plant Variety Protection”. However, the course has not been organized for several years, whereas training is now being organized on seed quality.

## China

|                  |  |
|------------------|--|
| Funds            | No data available to the evaluation team   |
| Target countries | Probably countries (around 150) that have joined the “Belt and Road Initiative” (aka “One Belt One Road” or “New Silk Road”) – see below |



## Annex 2

## PROJECTS WITH THE AIM OF ASSISTING POLICY DEVELOPMENT

(Brackets indicates that the comments relate to multiple activities under the PVP Toolbox)

| Year | Reference   | Target country | Title  | Aim    | Topic    | Impact    | Most useful   | Improvements suggested                                       | Perspective change  | Outcomes   | Promotions |
|------|-------------|----------------|--|--------|----------|-----------|---|--|---|--|------------|
| 2022 | R21-TBX01   | Algeria        | Visit to Algeria to raise awareness about the benefits of becoming a UPOV member                             | Policy | UPOV PVP |           |   |  |   |  |            |
| 2021 | R21-TBX07   | APSA           | Online training in PVP “Train the Trainer”   | Policy | UPOV PVP |           |   |  |   |  |            |
| 2021 | R21-TBX10.1 | Kazakhstan     | Online annual Plant Breeders’ Rights for Food Security and Economic Development course                       | Policy | UPOV PVP | (10)      | (Structured approach helped clarify complex concepts)   | (More practical work)  | (Importance of PVP in encouraging innovation and ensuring fair benefits for plant breeders) | (Led to the development of clearer guidelines for breeders on intellectual property protection)  | No         |
| 2023 | R23-TBX07   | Kazakhstan     | Follow up  | Policy | UPOV PVP | see above |   |  |   |  |            |
| 2024 | R24-TBX11   | Kazakhstan     | Visit of the Kazakh Parliamentarians to the Netherlands  | Policy | UPOV PVP | see above |   |  |   |  |            |
| 2023 | R23-TBX13   | Suriname       | Assistance in screening of the draft Breeders’ rights bill and implementation of the breeder’s rights system | Policy | UPOV PVP | 10        | Inception visit because that worked a lever to open more possibilities and as such had the greatest | More practical guidance on UPOV and other country resources. | Expanded my understanding of the legislation much more. The why behind the legislation.     | Direct outcome is the Seed bill conform UPOV Convention 1991 that is now at the Parliament. The PVP Toolbox lead to the assistance of UPOV with legislation and very useful trainings. It also lead to the | No         |

| Year | Reference | Target country | Title   | Aim                     | Topic                    | Impact | Most useful   | Improvements suggested | Perspective change  | Outcomes  | Promotions |
|------|-----------|----------------|---|-------------------------|--------------------------|--------|---|------------------------|---|---|------------|
|      |           |                |   |                         |                          |        | impact for Suriname                                   |                        |   | bilateral Makandra project on the development of the Seed sector and policy.                    |            |
| 2024 | R24-TBX18 | Thailand       | Promoting plant variety protection to small farmers In Thailand   | Policy                  | UPOV PVP                 |        |   |                        |   |   |            |
| 2022 | R21-TBX23 | UPOV           | E-learning Module: PVP Law (UPOV 91) Myth-busting   | Policy                  | UPOV PVP                 |        |   |                        |   |   |            |
| 2022 | R21-TBX08 | China          | Online workshop on Enforcement.   | Policy                  | Enforcement              |        |   |                        |   |   |            |
| 2022 | R21-TBX20 | Kazakhstan     | (2 events) Training course on plant breeders' rights and variety testing in Kazakhstan, with focus on potatoes and fruit crops & Awareness raising PBR seminar and NL business week in Kazakhstan | Policy & Implementation | Combined: UPOV PVP & DUS | (10)   | (Structured approach helped clarify complex concepts) | (More practical work)  | (Importance of PVP in encouraging innovation and ensuring fair benefits for plant breeders) | (Led to the development of clearer guidelines for breeders on intellectual property protection) | No         |
| 2022 | R21-TBX04 | Chile          | Study visit to NL focus on UPOV 91  | Policy & Implementation | UPOV 91 PVP              |        |   |                        |   |   |            |
| 2022 | R21-TBX12 | Egypt          | Training on PBR and DUS and Seminar on PBR and its benefits   | Policy & Implementation | UPOV PVP                 | (9)    | (Opportunity for cooperation between countries)       |                        | (Yes)   | (Experience)  | No         |

| Year | Reference | Target country | Title  | Aim                     | Topic                  | Impact | Most useful                          | Improvements suggested | Perspective change   | Outcomes   | Promotions |
|------|-----------|----------------|--|-------------------------|------------------------|--------|--------------------------------------|------------------------|--|--|------------|
| 2024 | R24-TBX02 | Azerbaijan     | Harmonization of country's legislation and procedures with UPOV standards and guidelines | Policy & Implementation | UPOV PVP               | (8)    | (Examples & cases)                   | (Distribute videos)    |  | (Training)   | No         |
| 2024 | R24-TBX24 | Western Balkan | Western Balkan Conference on Plant Breeders' Rights                                      | Policy & Implementation | UPOV PVP & Enforcement | 10     | Qualified speakers & relevant topics |                        | Better understanding of the role of the PVP, we were introduced to good examples of enforcement of PVP in the Netherlands as well as implemented by certain companies in Serbia. | Greater awareness of importance and the role of PVP and practical implementation of PVP. | No         |

## ANNEX 3

## PROJECTS WITH THE AIM OF ASSISTING IMPLEMENTATION

(Brackets indicates that the comments relate to multiple activities under the PVP Toolbox)

| Year | Reference | Target country | Title  | Aim                     | Topic   | Impact    | Most useful                                     | Improvements suggested       | Perspective change | Outcomes          | Promotions |
|------|-----------|----------------|--|-------------------------|---------|-----------|---|------------------------------|--------------------|-------------------|------------|
| 2024 | R24-TBX01 | Armenia        | Capacity building for the establishment of the protection the breeder's rights system in the Republic of Armenia | Implementation          | General | 8         | Visit to experts                                |                              |                    | PVP system design | no         |
| 2023 | R23-TBX01 | Azerbaijan     | Training to the PVP office staff   | Implementation          | General | (8)       | (Examples & cases)                              | (Distribute videos)          |                    | (Training)        | No         |
| 2024 | R24-TBX02 | Azerbaijan     | Harmonization of country's legislation and procedures with UPOV standards and guidelines                         | Policy & Implementation | General | see above |   |                              |                    |                   |            |
| 2022 | R21-TBX04 | Chile          | Study visit to NL focus on UPOV 91   | Policy & Implementation | General |           |   |                              |                    |                   |            |
| 2022 | R21-TBX12 | Egypt          | Training on PBR and DUS and Seminar on PBR and its benefits  | Policy & Implementation | General | (9)       | (Opportunity for cooperation between countries) |                              | (Yes)              | (Experience)      | No         |
| 2023 | R23-TBX05 | Ghana          | Assistance to Ghana on PVP implementation following its  | Implementation          | General | (7)       | (Knowledge)                                     | (Practical in situ sessions) |                    | (Knowledge)       | No         |

| Year | Reference | Target country | Title   | Aim                     | Topic   | Impact    | Most useful   | Improvements suggested | Perspective change  | Outcomes  | Promotions |
|------|-----------|----------------|---|-------------------------|---------|-----------|---|------------------------|---|---|------------|
|      |           |                | membership to UPOV  |                         |         |           |   |                        |   |   |            |
| 2024 | R24-TBX07 | Ghana          | Assistance to Ghana on PVP implementation following its membership to UPOV  | Implementation          | General | see above |   |                        |   |   |            |
| 2022 | R21-TBX19 | Jordan         | Training and Multi-Stakeholder roundtable meeting   | Implementation          | General | 10        | Team building, problem-solving                        |                        | Role in promoting agricultural biodiversity and encouraging international trade             | Knowledge   |            |
| 2022 | R21-TBX20 | Kazakhstan     | (2 events) Training course on plant breeders' rights and variety testing in Kazakhstan, with focus on potatoes and fruit crops & Awareness raising PBR seminar and NL business week in Kazakhstan | Policy & Implementation | General | (10)      | (Structured approach helped clarify complex concepts) | (More practical work)  | (Importance of PVP in encouraging innovation and ensuring fair benefits for plant breeders) | (Led to the development of clearer guidelines for breeders on intellectual property protection) | No         |

| Year | Reference | Target country      | Title   | Aim            | Topic   | Impact | Most useful   | Improvements suggested            | Perspective change   | Outcomes  | Promotions  |
|------|-----------|---------------------|---|----------------|---------|--------|---|-----------------------------------|--|---|---|
| 2024 | R24-TBX14 | Morocco             | Study Visit by a Delegation from Morocco to Naktuinbouw   | Implementation | General | 9      | Knowledge of potato variety registration & certification. Knowledge of potato breeding and market requirements. | Practical DUS training            | Important role of PVP which allows us to benefit from the latest advances in varietal creation | Improvements have been made to the processing potato variety evaluation system. Improvement of DUS tests, notably the inclusion of disease resistance criteria. | No  |
| 2022 | R21-TBX25 | OAPI & ARIPO        | Meeting with OAPI & ARIPO   | Implementation | General |        |   |                                   |  |   |   |
| 2023 | R23-TBX14 | Tanzania            | Seminar to strengthen the effective implementation of PBR in the United Republic of Tanzania (Mainland) | Implementation | General | (9)    | (Seed industry participation)   | (UPOV members to share expertise) | (PVP provides confidence in investing in the breeding industry)                                | (Domestication of UPOV test guidelines)   | (From Agricultural Officer to Principal Agricultural Officer) |
| 2022 | R21-TBX28 | Tanzania (Zanzibar) | Training of the Plant Variety Protection (PVP) Office in Zanzibar                                       | Implementation | General | (9)    | (Seed industry participation)   | (UPOV members to share expertise) | (PVP provides confidence in investing in the breeding industry)                                | (Domestication of UPOV test guidelines)   | (From Agricultural Officer to Principal Agricultural Officer) |

| Year | Reference | Target country | Title  | Aim                     | Topic   | Impact | Most useful   | Improvements suggested            | Perspective change   | Outcomes  | Promotions  |
|------|-----------|----------------|--|-------------------------|---------|--------|---|-----------------------------------|--|---|---|
| 2023 | R23-TBX19 | Ukraine        | Visit to the Netherlands/ Round table for the representatives of the Ukrainian | Implementation          | General | (10)   | (especially presentations of colleagues from the Naktuinbouw) | (Repeat and increase cooperation) | (Importance of cooperation and discussion)   | (applicants from the Netherlands learned more about the procedure for registering varieties in Ukraine) | (yes, one person directly started managing programs and projects) |
| 2022 | R21-TBX35 | UPOV           | UPOV PVP Accreditation Program   | Implementation          | General |        |   |                                   |  |   |   |
| 2023 | R23-TBX16 | USA            | Online meeting with USDA PVPO  | Implementation          | General |        |   |                                   |  |   |   |
| 2024 | R24-TBX24 | Western Balkan | Western Balkan Conference on Plant Breeders' Rights                            | Policy & Implementation | General | 10     | Qualified speakers & relevant topics                          |                                   | Better understanding of the role of the PVP, we were introduced to good examples of enforcement of PVP in the Netherlands as well as implemented by certain companies in Serbia. | Greater awareness of importance and the role of PVP and practical implementation of PVP.                | No  |

| Year | Reference | Target country     | Title  | Aim            | Topic | Impact | Most useful                                     | Improvements suggested | Perspective change | Outcomes                        | Promotions   |
|------|-----------|--------------------|--|----------------|-------|--------|---|------------------------|--------------------|---------------------------------|--|
| 2023 | R23-TBX02 | Bolivia            | Training on plant variety protection and developing national test guidelines for local crops | Implementation | DUS   | 8      | Expertise                                       | Expert network         |                    | Test guidelines for local crops | Technician to National Head of Seed Inspection and Registration at the National Seed Directorate of INIAF. |
| 2024 | R24-TBX05 | Dominican Republic | DUS training focus on Cacao  | Implementation | DUS   | 10     | Expertise                                       | None                   | No                 | Reference collection of Cocoa   | No   |
| 2023 | R23-TBX04 | Egypt              | Training on DUS  | Implementation | DUS   | (9)    | (Opportunity for cooperation between countries) |                        | (Yes)              | (Experience)                    | No   |

| Year | Reference | Target country | Title   | Aim            | Topic | Impact | Most useful | Improvements suggested        | Perspective change  | Outcomes   | Promotions  |
|------|-----------|----------------|---|----------------|-------|--------|-------------|-------------------------------|---|--|---|
| 2024 | R24-TBX12 | Kenya          | Enhanced plant variety protection system in Kenya             | Implementation | DUS   | 10     | Knowledge   | Medium- & long-term follow up | Enhanced understanding of PVP contribution to increase agricultural productivity and its positive impact on the country economy | <ol style="list-style-type: none"> <li>1. Improved process of receipt and verification of DUS applications.</li> <li>2. Creation of databases for photos and descriptors to facilitate selection of Comparison varieties.</li> <li>3. Establishment of seed collection</li> <li>4. Training of plant examiners on search for comparison varieties, scoring and drafting of national TG</li> <li>5. Establishment of committee of expert to provide their experts as need arises.</li> <li>6. Engaged with breeders to actively participate in drafting of Test guidelines and other related documents .</li> </ol> | The participants are coordinating and training other plant examiners on DUS examination of Ornamental and vegetables. |
| 2022 | R21-TBX09 | Latin America  | Graphic manual for the DUS examination of cocoa varieties     | Implementation | DUS   |        |             |                               |   |  |   |
| 2021 | R21-TBX17 | UPOV           | UPOV developing videos on DUS testing for PBR and UPOV DL-305 | Implementation | DUS   |        |             |                               |   |  |   |

| Year | Reference   | Target country | Title  | Aim            | Topic               | Impact | Most useful   | Improvements suggested            | Perspective change                         | Outcomes  | Promotions  |
|------|-------------|----------------|--|----------------|---------------------|--------|---|-----------------------------------|--|---|---|
| 2023 | R23-TBX18   | Ukraine        | Webinars/ meetings of the Ukrainian experts to Naktuinbouw/ administrative training                | Implementation | DUS & denominations | (10)   | (especially presentations of colleagues from the Naktuinbouw) | (Repeat and increase cooperation) | (Importance of cooperation and discussion) | (applicants from the Netherlands learned more about the procedure for registering varieties in Ukraine) | (yes, one person directly started managing programs and projects) |
| 2021 | R21-TBX18   | UPOV           | UPOV Prisma  | Implementation | IT tools            |        |   |                                   |  |   |   |
| 2022 | R21-TBX33   | UPOV           | UPOV PRISMA  | Implementation | IT tools            |        |   |                                   |  |   |   |
| 2023 | R23-TBX12   | UPOV           | UPOV PRISMA  | Implementation | IT tools            |        |   |                                   |  |   |   |
| 2024 | R24-TBX22   | UPOV           | UPOV e-PVP Module  | Implementation | IT tools            |        |   |                                   |  |   |   |
| 2022 | R21-TBX18   | Japan          | Study visit on enforcement   | Implementation | Enforcement         | (10)   | (DNA markers for DUS testing)                                 |                                   | (Use of DNA markers)                       | (Possible use of DNA markers in Japan)  |   |
| 2024 | R24-TBX10   | Japan          | Follow-up  | Implementation | Enforcement         | (10)   | (DNA markers for DUS testing)                                 |                                   | (Use of DNA markers)                       | (Possible use of DNA markers in Japan)  |   |
| 2021 | R21-TBX11.1 | Mexico         | Forum Report "Enforcement of Plant Breeder's Rights, of plant varieties of ornamental, in Mexico " | Implementation | Enforcement         | (10)   | (Hands-on approach)   |                                   | (Reinforced positive perspective )         | (Improved understanding of DUS)   | No  |

| Year | Reference | Target country | Title   | Aim            | Topic       | Impact    | Most useful | Improvements suggested | Perspective change | Outcomes | Promotions |
|------|-----------|----------------|---|----------------|-------------|-----------|-------------|------------------------|--------------------|----------|------------|
| 2022 | R21-TBX21 | Mexico         | Enhancing breeder's rights protection in Mexico by strengthening its institutional capacities to verify infringements           | Implementation | Enforcement | See above |             |                        |                    |          |            |
| 2023 | R23-TBX08 | Mexico         | Enhancing breeders' rights protection in Mexico by strengthening its institutional capacities to verify infringements follow-up | Implementation | Enforcement | See above |             |                        |                    |          |            |