RNAM HISTORY OF TECHNOLOGICAL TRANSFERS
&
IMPLICATIONS FOR CSAM'S EXCHANGE SYSTEM

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UNITED NATIONS ESCAP
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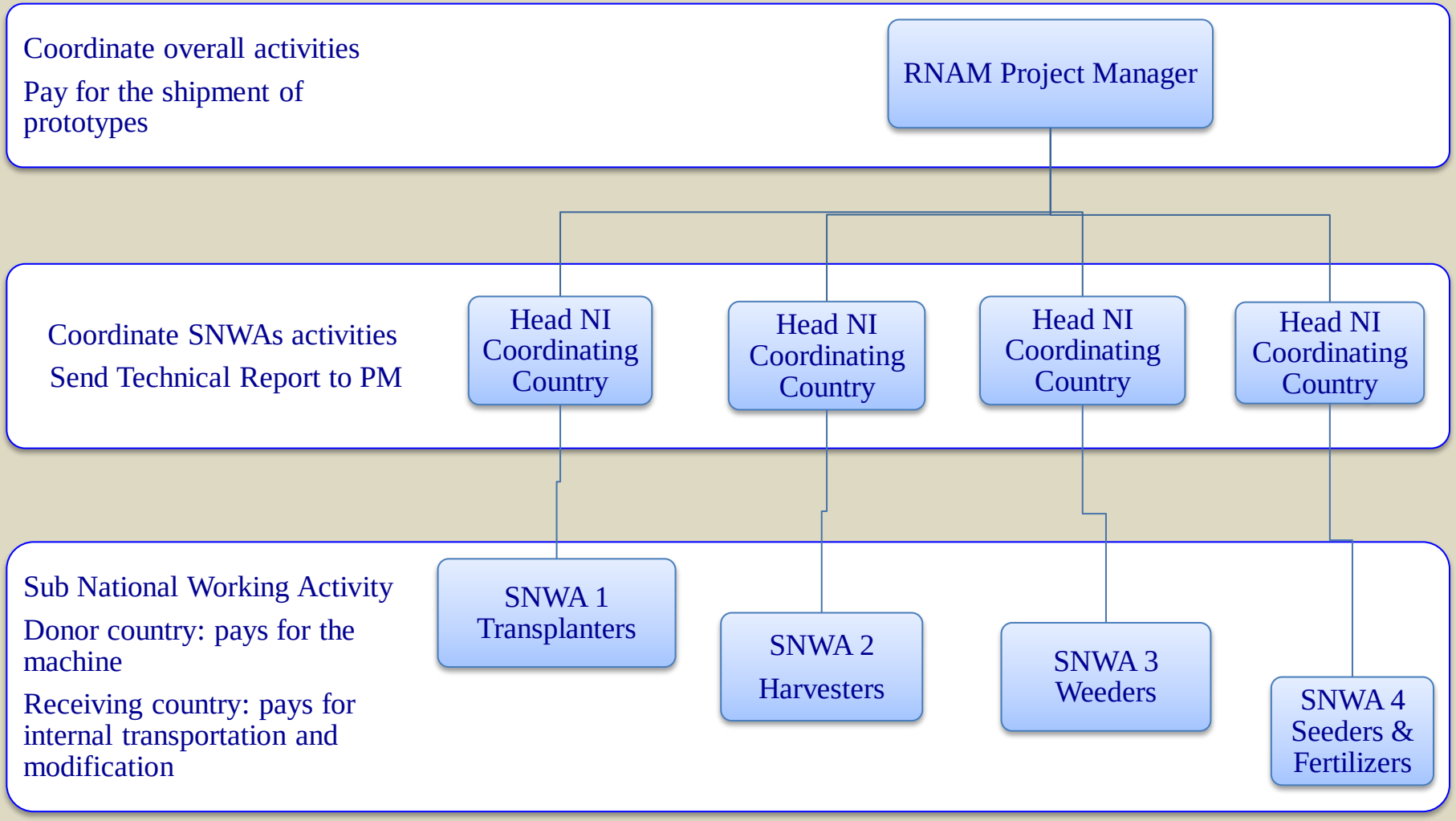
CSAM

Outline

- Phase I: Supply of Prototypes (1977-1981)
- Phase II & III: Mutual Exchange of Prototype (1982-1986)
- Phase IV: Exchange of Commercialized Machines (1987-1991)
- Phase V: Collaboration with the Private Sector (1992-2002)
- RNAM Project Limitations
- Consideration regarding the possibility of developing CSAM's Prototype & Design exchange program
- Conclusion

Phase I: Supply of Prototypes (1977-1981)



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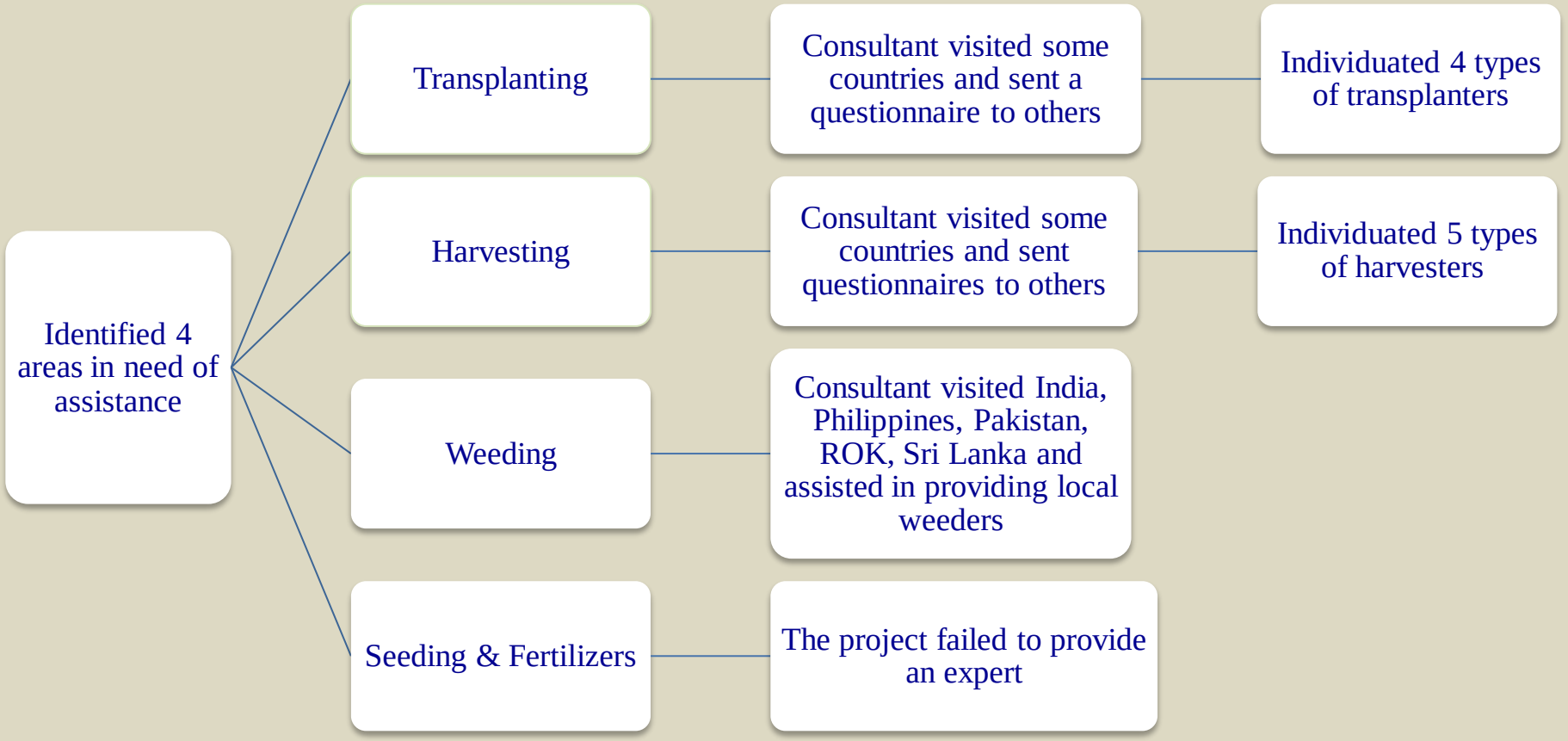
Phase I: Supply of Prototypes (1977-1981)



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Phase I: Supply of Prototypes (1977-1981)

- Transplanters

RNAM shipped 19 transplanters. An expert introduced these machines in the 8 participating countries.

- The Annapurna (India) Mametora (Japan) was found unsuitable by all recipients.
- The Chinese Tang-Hong has been modified by the Philippines' NIs.
- The IRRI machine had to be modified.

- Harvesters

RNAM supplied 20 units of 5 types of machines. An expert helped initiate work on the machines in the recipient countries.

- The machines from India and Japan were found unsuitable.
- In Pakistan, more than 3,000 units of the Chinese front-mounted tractor, have been modified and more than 1.500 units were locally produced.
- The Indian NI evolved its version of the Chinese machine.

Phase II & III: Mutual Exchange of Prototype (1982-1986)

The heads of the 8 participating NIs selected 53 machines for Mutual Exchange

In June 1985 only 32 machines were received by requesting countries

Status of Mutual Exchange of Prototypes (1992)

Initial Testing	4
Extensive Testing	6
Modification	2
Unsuitable	**20**
Initial Batch of Production	2
Popularization	1
Commercial Production	2
Total	**37**

Phase IV: Exchange of Commercialized Machines (1987-1991)

(a) Exchange of commercialized machines

Out of the 33 exchanged machines, 7 reached the commercial production stage by August 1992. Considering that it generally takes two to five years from introduction to commercialization of a machine, the results achieved by this program were far more successful than that of the prototype-exchange program.

(b) Exchange of drawings

One of the recommendations of the TAC during its 12th session in February 1988 was the promotion of an exchange of designs between NIs. The project design required NIs to submit specific drawings to RNAM, that was in charge of facilitating the exchange. By 1990 participating countries had already requested 85 designs for mutual exchange and RNAM was able to supply 21. Several Technical Design Workshops were also promoted.

Phase V: Collaboration with the Private Sector (1992-2002)

- RNAM continued to carry out both exchange of commercial machinery and exchange of designs. However, it was not possible to find any concrete data on this period.
- Great emphasis was given to bilateral exchanges and collaboration with the private sector.
- Promotion of Agrimach symposium.

Project Conclusion

- Supply and Mutual Exchange of Prototypes: out of the 37 hardware received by member countries only 2 evolved into commercialized machines.
- Exchange of Commercialized Machines: 7 machines out of the 33 received by participating NIs reached the commercialized production stage.
- Machinery Designs: Out of the 85 requested designs, 21 were actually received by requesting institutions.

RNAM Project Limitations

Limited infrastructural capacity: NIs had no infrastructural or budgetary capacity to sustain the workload required by the project. Moreover, given the limited capacity, several NIs failed in gathering attention and funding from their national governments.

Lack of skilled personnel: There was a lack of skilled personnel both in RNAM and in the NIs. This is one of the main causes of lack of background research in the beginning of the project, and appropriate progress evaluation methodology..

Limited involvement of end-users: Farmers associations limited involvement in NIs activities delayed the evaluation process of the machines supplied to NIs

Budgetary constraints: The limitations of budget both in RNAM and in the NIs greatly limited the development of the program,

Consideration regarding the possibility of developing CSAM's Prototype & Design exchange program

Consider a step-by-step approach

- Phase I: Establish an online platform for exchange of designs as a restricted area of our website.
- Evaluation Phase: Test the level of commitment of NIs, and operations design.
- Phase II: Eventually proceed to establish a more complex exchange that might involve both prototypes and commercialized machines.

Consideration regarding the possibility of developing CSAM's Prototype & Design exchange program

- In order to design a successful program it is important to explore possible collaborations with the private sector. Consider ways to foster the collaboration with private manufacturers (Ex. Agrimach).

- Consider the organization of design workshops, or to dedicate a specific portion of annual meetings (e.g. TC meetings) to the exchange of designs.

Conclusion

The present structure of CSAM lacks the technical knowledge of RNAM's project managers. Nonetheless, as a UN center, CSAM could provide valuable program management support.

TC Members are, therefore, invited to reflect upon the following points:

- Enquire member countries on their interest in the establishment of an exchange program.
- Consider CSAM technical and budgetary capabilities to sustain this program.
- Consider the adoption of a step-by-step approach, starting from the exchange of design to the exchange of hardware in a second phase.
- Consider the promotion of other kinds of cooperation activities. Such as, dedicating one portion of annual meetings to design exchanges, or organizing an international agricultural machinery symposium.

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Thank you for your kind attention