

# Conclusion and next steps

Latin America and Caribbean (LAC)

Cacao Breeders Group

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# Conclusion and next steps

1. Where do we want to be in 10-20 years time?
2. What are the main gaps and constraints in breeding of cacao today?
3. What are proposed solutions?
4. What can this group directly do about it?

# Some key questions - 1

1. How to develop national and regional strategies for the planning of cacao planting materials:
  1. For what purpose? What market?
  2. How to define national objectives based on origin and uniqueness?
  3. What materials?
  4. What propagation/multiplication method?
2. For the planting materials in these strategies: what are the key research questions, common constraints – what can be done together?
3. Of the diversity that exists – what is currently conserved and what needs to be safeguarded? How much characterisation do we have and what are the main gaps?
4. How to determine indication of origin to value this uniqueness in the market?

# Some key questions - 2

1. How to develop common standards, protocols, methods:
  1. For characterisation – morphological descriptors
  2. For evaluation – pest and diseases resistance protocols
  3. For quality and flavour – definition of quality and sensory evaluation standards and protocols for the speciality cacao market
2. How to involve all sectors of the value chain from producers to processors, buyers and consumers, researchers and the industry as a whole?
3. How to provide support to the characterisation – understanding what we have, how unique it is and what we need to promote for the current and future markets?
4. How to ensure the complete conservation of the cacao genepool – the specific case of the criollos – to promote use for specialty markets and national strategies?

# Some key questions - 3

1. Characterization and evaluation of key traits:
  1. Drought and temperature tolerance – for climate change
  2. Pest and diseases: Black pod / Frosty pod / Witches' Broom
    - Viruses? Others?
  3. Quality
  4. Flavours
2. What business model do we have for cacao?
  1. Who pays for basic research?
  2. How to generate benefits from cacao genetic resources and germplasm?
  3. How to ensure benefits are shared in a fair and equitable way?

# Some Collaboration Platform and Tools

1. **INGENIC** – International Cacao Genetic Improvement Group – [www.incocoa.org](http://www.incocoa.org)
2. **Regional Cocoa Breeders groups** in Asia/Pacific, Africa and LAC
3. **IBP** – the CGIAR Integrated Plant Breeding Platform  
[www.integratedbreeding.net](http://www.integratedbreeding.net)
  1. Sharing of protocols and methods – referenced
  2. Facilitate agreement on adoption of standards
4. **CacaoNet** – Global Network for Cacao Genetic Resources – [www.cacaonet.org](http://www.cacaonet.org)
5. **CATIE and CRC** - International collections – public domain
6. **ICQCR** - International Cocoa Quarantine Centre, Reading – UK, [www.icgd.reading.ac.uk/icqc](http://www.icgd.reading.ac.uk/icqc) info available at ICGD: [www.icgd.reading.ac.uk](http://www.icgd.reading.ac.uk)

## Objectives:

- Ensure the inclusion of the correct expertise around each priority
- Ensure the participation of cacao growers
- Ensure necessary feedback from the complete value chain

# Global Evaluation Programme

1. Identify the market priorities for each country and pull at regional level
2. Agree on a number of key traits addressing these priorities
3. Define the regional specificities
4. List all the germplasm (clones, varieties and breeding materials) that participants are willing to share – build on what we have and that is available
5. Agree on the additional germplasm that people need to access for evaluation
6. Develop clear and transparent materials sharing agreements (MTS) that define terms and condition for use and for passing on to third party – global agreement and bilateral negotiations
7. Agree on the common standards and protocols for each priority trait
8. Select participating sites for evaluation including clear agreement of workplans
9. Implement: coordinate, monitor and evaluate progress
10. Share results on an annual basis

# Offers of contribution

Nestlé, Tours, France - Anne Buchwalder and Pierre Broun

- **Somatic Embryogenesis (SE) multiplication of clone of interest and belonging to the international collection.**
  - If today we agree on a common platform of evaluation Nestlé could help in SE multiplication if this propagation method is the one we adopt for more homogeneity.
- **Provide for evaluation of new breeding material coming out from Nestlé breeding program.**
  - If we develop multi location field evaluation platforms in producing countries from South and central America, Nestlé could give material that has been bred and appeared of interest in their evaluation.
  - As Nestlé is in the early stage of evaluation, this material will not be ready before 2 years' time.
- If you communicate openly to the other this position, please insist on the fact that this is material that Nestlé is being breeding since 2007.
- Proposal from Nestle - as long as the quantity and volume of work remains reasonable .



# Other offers

- USDA – cacao clones from the Puerto Rico and Ecuador programmes
- USDA - Plans for a regional cacao quarantine centre in Miami
- ICQCR - All materials and information on their evaluation for CC, from the International Cocoa Quarantine Centre, Reading – UK, info available at: [www.icgd.reading.ac.uk](http://www.icgd.reading.ac.uk)
- International collections at CATIE and CRC-Trinidad

# Other offers