Cryo-preservation of Animal Genetic Resources-The need for action now (Summary of group discussions during the Side Event)

Introduction:

From the presentations and discussions during this conference, there is general agreement on the need for, and support for cryo-banking as an important and integral part of effort to conserve animal genetic resources, especially in developing countries, where the diversity is greatest but risk of loss currently higher.

- There was recognition of the need to have technology choices depending on:
  - the setup costs
  - the marginal costs per additional animal processed
  - the marginal costs per additional breed/population processed
  - the cost of breed reconstitution
  - the target species (chicken more expensive than sheep and goats and cattle)
- We are unable to precisely predict the future, so saving what is at risk now would justify the costs for undertaking such actions.

The main issues raised:

- Cryopreservation should be an additional insurance rather than the only strategy
- The need to combine, cryopreservation and preservation of somatic cells
- How to sample (start with known hot and cold spots and fill in as information and resources become available). Also, periodic sampling of same or related populations after 50 or so years could be planned.
- Cost efficiency of somatic cell and nuclear transfer technologies (SCNT), but in emergency situations, where semen, embryos are not possible to collect, SCNT should be the option; but recognizing that the cost of reconstituting a breed is much greater with SCNT. (Save now - Pay later)
- Concerns raised as to the acceptability of cloning (SCNT)
- Issue of possibilities of diseases being transferred and preserved during the process, hence research inputs to help better mitigate such risks and inform better sampling strategies need to be embraced.
- The disease status of apparently disease free samples at the time of freezing will probably need to be revised in the future as diagnostic tools proliferate. In addition, characterization w be more extensive than is possible today so the need to perform extensive characterization today is less essential.
- The need to consider regional, bilateral focus and multiple location of the gene banks in a way to go.

The way forward

- There is need for some immediate action, starting with a mention of this need as part of this conferences' declaration, if possible.
- Preparation for guidelines and documentation and to be used to engage FAO and inter-governmental organizations is needed.
- A committee comprising (Ms Sonia Maciel (Mozambique), Nimal Chandrasiri (Sri-Lanka) and David Sendalo (Tanzania) were nominated to work with the a team of experts (Groeneveld (Germany), Hiemstra(Holland), Blackburn (USA), Sandy McClintock (ILRI) to move this process further
- Need to initiate some piloting activities was emphasized