

Global Forum for Food and Agriculture

Communiqué 2019

“Agriculture Goes Digital – Smart Solutions for Future Farming”

I. Preamble

1 **We, the agriculture ministers of 74 nations,** have assembled here on 19 January 2019 for
2 the 11th Berlin Agriculture Ministers' Conference on the occasion of the Global Forum for
3 Food and Agriculture (GFFA) to discuss how digitalization¹ can strengthen the agricultural
4 sector's economic viability, sustainability, resource conservation, resilience and consumer
5 orientation.

6 Over the last 50 years, the world's population has doubled. During the same period, thanks
7 to technological and organisational innovations as well as conducive agricultural and food
8 policies, global agricultural production has tripled. However, there are still over 821 million
9 people in the world who are suffering from hunger and over 2.5 billion people in total
10 suffering from malnutrition. The global population is also predicted to rise to around 10
11 billion by the year 2050. At the same time, the natural resources to feed the growing
12 population are limited and agriculture is being confronted by further challenges such as
13 climate change, water scarcity, soil degradation and the loss of biodiversity.

14 Agricultural production must rise significantly while simultaneously increasing its
15 sustainability, improving animal welfare, adapting better to local conditions and providing
16 decent jobs and revenue along the supply chain. Agriculture must also use resources more
17 efficiently and minimize food loss. Smart solutions are needed to reconcile conflicting goals
18 and meet the current and future demand for safe and nutritious food and feed. Digitalization
19 in agriculture will play an important role in achieving these goals, improving livelihoods and
20 living conditions in rural areas, supporting farmers in their work as well as in transforming
21 lives in rural areas substantially.

22 We hereby jointly adopt the following resolutions with the aim of shaping and promoting the
23 digitalization of agriculture. In this regard we are committed to the goals of the 2030 Agenda

¹ Digitalization for agriculture brings together digital technologies, digital innovations, information and communications technologies and artificial intelligence.

24 for Sustainable Development, in particular the goal of zero hunger, and also to the Paris
25 Agreement on Climate Change.

26

27 **II. Call for Action**

28 **We, the agriculture ministers assembled at GFFA 2019**, aim to use the potential of
29 digitalization to increase agricultural production and productivity, while improving
30 sustainability, efficient use of resources, employment and entrepreneurial opportunities and
31 living conditions, especially in rural areas. Our aim is for digital solutions to support
32 environmentally sound and animal welfare-oriented production, increase the quality and
33 safety of agricultural products, reduce production costs, improve the availability of
34 information throughout the food system and facilitate trade.² To this end, farms should be
35 integrated more closely into value chains and markets and the attractiveness of agriculture
36 and rural areas increased. We will focus in particular on family farms, which make up around
37 90 percent of all agricultural enterprises worldwide and account for approximately 56
38 percent of agricultural production.

39

40 Therefore we intend to take action to achieve the following four objectives:

41

42 ***Identifying and using the potential of digitalization***

43 Our goal is for digitalization to make agriculture more efficient and more sustainable, and to
44 improve rural life. To this end we must provide impetus for the development of appropriate,
45 site-adapted and scalable digital solutions in agriculture.

46 Our aims are to:

- 47 1. create the conditions to encourage responsible investment in digital technologies for
48 the development of a vibrant agricultural sector, in particular start-ups and Micro,
49 Small and Medium Enterprises (MSMEs), in a market-oriented environment;

²At this 11th Berlin Agriculture Ministers' Conference on 19 January 2019, we acknowledge the report by the working group of FAO, ILRI, OIE and GASL on action taken to respond to the 10th Berlin Agriculture Ministers' Conference (annex) on the subject of "Shaping the future of livestock – sustainably, responsibly, efficiently".

- 50 2. intensify research and development into digital technologies, as well as the training
51 of digital skills and capacity building, in order to assist farmers and stakeholders in
52 making agricultural production and the value chain more efficient and sustainable;;
- 53 3. exchange know-how and practical experiences relating to digitalization in agriculture
54 with the objective of creating an innovative and entrepreneurial environment;
- 55 4. use digital technologies and processes, such as electronic phytosanitary certification
56 data, to facilitate agri-food trade and regulatory cooperation;
- 57 5. improve geo-data and remote-sensing systems to enhance data quality and
58 accessibility while ensuring privacy;
- 59 6. use digital solutions to strengthen animal health and animal welfare, foster prudent
60 and responsible use of antimicrobial agents in animal husbandry and optimize the
61 use of plant protection products, water and fertilizers;
- 62 7. use digitalization for better design and more efficient implementation of agricultural
63 policies, in order to reduce bureaucracy in agriculture and thus lighten the burden on
64 agricultural enterprises;
- 65 8. support digital solutions, including advisory services, in order to reduce risks to
66 farmers and improve their resilience to crises, outbreaks of diseases, hazards and
67 natural disasters; and
- 68 9. use digitalization to improve consumer guidance and information and reduce food
69 loss and waste.

70

71 ***Establishing, expanding and protecting the access of farmers to digital technologies***

72 At present, around half of the world's population uses the internet, but use of the internet is
73 far lower in rural populations. It is our goal to improve access and thereby enable all farmers
74 in particular youth, smallholders and women, to use digital technologies in accordance with
75 their needs.

76 Our aims are to:

- 77 1. establish and accelerate the expansion of the digital infrastructure that farmers need;
- 78 2. leverage funds for digitalization and promote innovative financing instruments with
79 the support of all relevant stakeholders, in particular governments, international
80 organizations and the private sector;

- 81 3. support cooperatives and cooperative models in implementing digitalization in
82 agriculture;
- 83 4. expand the range of basic and advanced training programs and extension services
84 relating to digital skills and technologies that are available for farmers and to
85 encourage the networking of digital extension and advisory services; and
- 86 5. ensure that digital solutions provide farmers with appropriate information and better
87 market access, including to e-markets for food and agriculture.

88

89 ***Improving data use, ensuring data security and data sovereignty***

90 It is our goal to ensure that the interests of agriculture are taken into account in the drawing
91 up of international principles, guidelines and standards for the management of digital data
92 (inter alia the collection, recording, storage, retrieval, handling, analysis, processing and use
93 of data) and are integrated into the existing international networks and formats.

94 Our aims are to:

- 95 1. strive to ensure that international solutions are drawn up in collaboration with
96 agricultural stakeholders in order to develop standards and to reduce the global
97 differences in regulations on data collection, data security and data use;
- 98 2. enable farmers, along with academia, industry, policy makers and public authorities
99 at national and international levels, to use digitally collected data effectively;
- 100 3. improve the interoperability of digital systems in order to enhance the possibilities
101 for data exchange, data use and data analysis by farmers, academia, industry and
102 policy makers;
- 103 4. ensure that farmers are not dependent on individual digital systems and that
104 intellectual property rights and privacy rights of users relating to digital innovations
105 and information are protected and respected;
- 106 5. enhance trust and transparency about data governance principles, including rules on
107 authorization and oversight in data collection and data use, and promote data-use
108 models that enable farmers, in compliance with national rules, to decide themselves
109 on whether to pass on their operating, machine and business data;

- 110 6. provide public data through appropriate mechanisms and platforms in which such
 111 information is provided in standardized and practicable formats as open data in
 112 accordance with the FAIR principles (Findable - Accessible - Interoperable - Reusable);
- 113 7. promote digital solutions in order to strengthen the transparency, efficiency and
 114 integrity of the supply chains and to take effective steps against counterfeits, fraud
 115 and smuggling;
- 116 8. promote international digital data infrastructure in order to strengthen the cross-
 117 border fight against animal and plant pests and diseases and to rapidly exchange
 118 information on the current sanitary and phytosanitary situation; and
- 119 9. strive to establish digital methods at the World Organisation for Animal Health (OIE)
 120 in the framework of the renovation of its World Animal Health Information System
 121 (OIE-WAHIS) as an important component for exchanging information and for
 122 supporting veterinary services in designing their animal-disease control and
 123 eradication programs.

124

125 ***Managing structural changes in agriculture and rural areas***

126 Currently, approximately 45 percent of the world population live in rural areas, and
 127 agriculture is a vital economic sector. It is our goal to ensure that rural areas remain vibrant,
 128 competitive and attractive places to live; agriculture plays a crucial role in this. To this end
 129 we intend, within our remit, to monitor and manage the changes in economic structures,
 130 social structures, socio-cultural traditions, work remits and work requirements that are
 131 expected to result from digitalization.

132 Our aims are to:

- 133 1. incorporate agricultural policy more closely into the development of rural and digital
 134 policies and to ensure that digitalization is part of the respective strategic agendas;
- 135 2. mobilize responsible private and public investment in the digitalization of agricultural
 136 and food value chains in rural areas in order to use digital technologies and to keep
 137 and generate jobs, training and entrepreneurial opportunities, especially for youth
 138 and women;
- 139 3. enable farmers to have better links to regional, national and international markets on
 140 the basis of open, transparent and rule-based trade;

- 141 4. promote reliable and competitively priced connectivity throughout rural regions;
- 142 5. create a conducive context for start-ups and MSMEs and provide targeted support
- 143 for them in order to provide greater impetus for digital innovations in rural areas;
- 144 6. improve public awareness of the digital opportunities and the needs of farmers in
- 145 order to create acceptance and to enhance the attractiveness of the farming
- 146 profession; and
- 147 7. improve the living conditions of people from rural areas in order to tackle
- 148 depopulation-related issues that affect some of these areas.

149

150 **III. Conclusion**

151 **We, the agriculture ministers:**

- 152 1. underline the importance of digitalization for an efficient and sustainable agricultural
- 153 sector, aim to reduce inequality resulting from the digital divide and enable all
- 154 agricultural stakeholders to better participate in the digital transformation of policies,
- 155 industry and society, and call for the establishment of digital infrastructure
- 156 throughout rural areas;
- 157 2. regard the digitalization of agriculture as an opportunity to facilitate trade and to
- 158 meet the challenges, in particular those arising from climate change, and the
- 159 demands of the 2030 Agenda better than hitherto;
- 160 3. emphasize the need to implement the decision of the UN Climate Change Conference
- 161 (COP23) on agriculture (Koronivia Joint Work on Agriculture) and underline the
- 162 potential of digitalization in this regard;
- 163 4. recognise the need to build up appropriate databases and digital infrastructure, and
- 164 some countries emphasise their need for assistance in this regard;
- 165 5. aim, with this GFFA, to initiate a global process under the auspices of the United
- 166 Nations to create an international framework for digitalization in agriculture and:
- 167 • ask the FAO to draw up, in consultation with stakeholders including the World
 - 168 Bank, African Development Bank, IFAD, OECD, WTO, ITU, OIE and the Technical
 - 169 Centre for Agricultural and Rural Cooperation ACP-EU (CTA) and based on this
 - 170 communiqué, a concept for considering the establishment of an international
 - 171 Digital Council for Food and Agriculture that will advise governments and other

172 relevant actors, drive the exchange of ideas and experiences and consequently
 173 help everyone harness the opportunities presented by the digitalization;
 174 • encourage the FAO, with the involvement of other stakeholders, to draw up a
 175 technology impact assessment of the opportunities and risks presented by
 176 digitalization for agriculture and rural areas³ ;
 177 • based on the outcome of the technology impact assessment, invite the FAO to
 178 develop a common methodology to assess and track the digital development
 179 situation in the agricultural sector at national level⁴;

180 and we will discuss the results at the GFFA 2020;

- 181 6. will, with the involvement of international organisations, exchange thoughts and
 182 ideas on effective training programs and initiatives for farmers and for people in rural
 183 areas, especially women and youth, in order to promote and develop innovative
 184 environments, as well as to promote and expand strategies and programs for digital
 185 literacy;
- 186 7. regard strengthening international networks of farmers, public authorities, academia,
 187 the private sector, cooperatives and associations as a suitable means of pooling and
 188 disseminating knowledge and strategies relating to digitalization in the area of food
 189 and agriculture;
- 190 8. are aware of the importance of common definitions, standards and interfaces in
 191 respect of data and digital applications, data collection and storage, and intend to
 192 take measures to promote rules and voluntary agreements at national, regional and
 193 international level;
- 194 9. support measures to make public data - taking into consideration data privacy, data
 195 security and data sovereignty - available, accessible and usable;
- 196 10. encourage the OIE, with the involvement of its member countries and in
 197 collaboration with its public and private partners, and taking into account existing
 198 systems operating at national and international level, to develop an animal data
 199 system that leverages the opportunities presented by digitalization for more efficient
 200 management of animal diseases;

^{3,4} Subject to the availability of voluntary funds.

201 11. aim to develop national strategies for digitalization in food and agriculture and to
202 feed these into the respective national policies relating to rural areas and
203 digitalization.