

## Supplementary Information

# What Is Sustainable Agriculture? A Systematic Review.

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**Table S1.** List of analyzed publications.

Reference	Focus	Discipline
<i>Journal Articles</i>		
Abelson, P.H. Sustainable Agriculture and the 1995 Farm Bill. <i>Science</i> <b>1995</b> , 267, 943.	food system	eng. & nat. sc.
Afrous, A.; Abdollahzadeh, G. Assessing factors affecting on sustainability of agriculture a case of Dezful County, southwest Iran. <i>Aust. J. Basic Appl. Sci.</i> <b>2011</b> , 5, 1444–1449.	production	eng. & nat. sc.
Aikanathan, S.; Chenayah, S.; Sasekumar, A. Sustainable agriculture: A case study on the palm oil industry. <i>Malays. J. Sci.</i> <b>2011</b> , 30, 66–75.	supply chain	econ.
Aldy, J.E.; Hrubovcak, J.; Vasavada, U. The role of technology in sustaining agriculture and the environment. <i>Ecol. Econ.</i> <b>1998</b> , 26, 81–96.	production	econ.
Allahyari, M. Extensionists' Attitude Toward Sustainable Agriculture in Iran. <i>J. Appl. Sci.</i> <b>2008</b> , 8, 3761–3763.	production	agric. sc.
Appleby, M.C. Sustainable Agriculture is Humane, Humane Agriculture is Sustainable. <i>J. Agric. Environ. Ethics</i> <b>2005</b> , 18, 293–303.	food system	human.
Astier-Calderín, M.; Maass-Moreno, M.; Etchevers-Barra, J. Derivación de indicadores de calidad de suelos en el contexto de la agricultura sustentable. <i>Agrociencia</i> <b>2002</b> , 36, 605–620.	production	eng.& nat. sc.
Barbier, E.B.; Markandya, A.; Pearce, D.W. Sustainable agricultural development and project appraisal. <i>Eur. Rev. Agric. Econ.</i> <b>1990</b> , 17, 181–196.	production	econ.
Bebbington, A.J. Farmer knowledge, institutional resources and sustainable agricultural strategies: a case study from the eastern slopes of the Peruvian Andes. <i>Bull. Latin Am. Res.</i> <b>1990</b> , 9, 203–228.	production	human.

Table S1. Cont.

Reference	Focus	Discipline
<i>Journal Articles</i>		
Bédanger, V.; Vanasse, A.; Parent, D.; Allard, G.; Pellerin, D. Development of agri-environmental indicators to assess dairy farm sustainability in Quebec, Eastern Canada. <i>Ecol. Indic.</i> <b>2012</b> , <i>23</i> , 421–430.	production	agric. sc.
Beus, C.E.; Dunlap, R.E. Conventional Versus Alternative Agriculture: the Paradigmatic Roots of the Debate. <i>Rural Sociologyl</i> <b>1990</b> , <i>55</i> , 590–616.	food system	soc. & pol. sc.
Binder, C.R.; Feola, G.; Steinberger, J.K. Considering the normative, systemic and procedural dimensions in indicator-based sustainability assessments in agriculture. <i>Environ. Impact Assess. Rev.</i> <b>2010</b> , <i>30</i> , 71–81.	production	interdisc.
Blunden, G.; Cocklin, C.; Smith, W.; Moran, W. Sustainability: A view from the paddock. <i>N. Zeal. Geogr.</i> <b>1996</b> , <i>52</i> , 24–34.	production	interdisc.
Borch, K. Emerging technologies in favour of sustainable agriculture. <i>Futures</i> <b>2007</b> , <i>39</i> , 1045–1066.	production	interdisc.
Bowler, I. Developing sustainable agriculture. <i>Geography</i> <b>2002</b> , <i>87</i> , 205–212.	food system	interdisc.
Buckland, J. International obstacles to rural development: How neoliberal policies constrain competitive markets and sustainable agriculture. <i>Can. J. Dev. Stud.</i> <b>2006</b> , <i>27</i> , 9–24.	production	econ.
Burkhardt, J. The morality behind sustainability. <i>J. Agric. Ethics</i> <b>1989</b> , <i>2</i> , 113–128.	production	human.
Buttel, F.H. The politics and policies of sustainable agriculture: Some concluding remarks. <i>Soc. Nat. Resour.</i> <b>1997</b> , <i>10</i> , 341–344.	food system	soc. & pol. sc.
Caviglia, J.L.; Kahn, J.R. Diffusion of Sustainable Agriculture in the Brazilian Tropical Rain Forest: A Discrete Choice Analysis. <i>Econ. Dev. Cult. Chang.</i> <b>2001</b> , <i>49</i> , 311–333.	production	econ.
Chiappe, M.B.; Butler Flora, C. Gendered Elements of the Alternative Agriculture Paradigm. <i>Rural Sociol.</i> <b>1998</b> , <i>63</i> , 372–393.	food system	soc. & pol. sc.
Chokor, B.A.; Odemerho, F.O. Land degradation assessment by small scale traditional African farmers and implications for sustainable conservation management. <i>Geoforum</i> <b>1994</b> , <i>25</i> , 145–154.	production	interdisc.
Christianson, L.; Tyndall, J. Seeking a dialogue: a targeted technology for sustainable agricultural systems in the American Corn Belt. <i>Sustain. Sci. Pract. Policy</i> <b>2011</b> , <i>7</i> , 70–77.	production	eng. & nat. sc.
Cobb, D.; Dolman, P.; O’Riordan, T. Interpretations of sustainable agriculture in the UK. <i>Progress in Human Geography</i> <b>1999</b> , <i>23</i> , 209–235.	food system	interdisc.
Culleton, N.; Tunney, H.; Coulter, B. Sustainability in Irish agriculture. <i>Irish Geography</i> <b>1994</b> , <i>27</i> , 36–47.	production	agric. sc.
Dantsis, T.; Loumou, A.; Giourga, C. Organic Agriculture’s Approach towards Sustainability; Its Relationship with the Agro-Industrial Complex, A Case Study in Central Macedonia, Greece. <i>J. Agric. Environ. Ethics</i> <b>2009</b> , <i>22</i> , 197–216.	supply chain	interdisc.
Dillon, E.J.; Hennessy, T.; Hynes, S. Assessing the sustainability of Irish agriculture. <i>Int. J. Agric. Sustain.</i> <b>2010</b> , <i>8</i> , 131–147.	production	econ.
Dima, S.J.; Odero, A.N. Organic Farming for Sustainable Agricultural Production: A Brief Theoretical Review and Preliminary Empirical Evidence. <i>Environ. Resour. Econ.</i> <b>1997</b> , <i>10</i> , 177–188.	production	econ.
Dubey, N.K.; Shukla, R.; Kumar, A.; Singh, P.; Prakas, B. Prospects of botanical pesticides in sustainable agriculture. <i>Curr. Sci.</i> <b>2010</b> , <i>98</i> , 479–480.	production	eng. & nat. sc.

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Reference	Focus	Discipline
<i>Journal Articles</i>		
Duvick, D.N. Biotechnology is compatible with sustainable agriculture. <i>J. Agric. Environ. Ethics</i> <b>1995</b> , 8, 112–125.	production	agric. sc.
Epps, R. The sustainability of Australian agricultural production systems: a realistic objective or simply a desirable aim? <i>Aust. Geogr.</i> <b>1995</b> , 26, 173–179.	production	interdisc.
Erenstein, O.; Sayre, K.; Wall, P.; Hellin, J.; Dixon, J. Conservation Agriculture in Maize- and Wheat-Based Systems in the (Sub)tropics: Lessons from Adaptation Initiatives in South Asia, Mexico, and Southern Africa. <i>J. Sustain. Agric.</i> <b>2012</b> , 36, 180–206.	production	agric. sc.
Falvey, L. Agri-history and sustainable agriculture: A consideration of technology and ancient wisdom. <i>Asian Agri-Hist.</i> <b>2003</b> , 7, 279–294.	production	agric. sc.
Feldman, S.; Welsh, Rick. Feminist Knowledge Claims, Local Knowledge, and Gender Divisions of Agricultural Labor: Constructing a Successor Science1. <i>Rural Sociol.</i> <b>1995</b> , 60, 23–43.	production	soc. & pol. sc.
Ferreira, C. Emergy analysis of one century of agricultural production in the Rolling Pampas of Argentina. <i>Int. J. Agric. Resour. Gov. Ecol.</i> <b>2006</b> , 5, 185–205.	production	interdisc.
Filson, G.C. Demographic and farm characteristic differences in ontario farmers' views about sustainability policies. <i>J. Agric. Environ. Ethics</i> <b>1996</b> , 9, 165–180.	production	soc. & pol. sc.
Firbank, L.G. Commentary: Pathways to global sustainable agriculture. <i>Int. J. Agric. Sustain.</i> <b>2012</b> , 10, 1–4.	production	eng. & nat. sc.
Fışun Tatlıdil, F.; Boz, İ.; Tatlıdil, H. Farmers' perception of sustainable agriculture and its determinants: a case study in Kahramanmaraş province of Turkey. <i>Environ. Dev. Sustain.</i> <b>2009</b> , 11, 1091–1106.	supply chain	agric. sc.
Girardin, P.; Bockstaller, C.; van der Werf, H. Assessment of potential impacts of agricultural practices on the environment. <i>Environmental Impact Assessment Review</i> <b>2000</b> , 20, 227–239.	production	agric. sc.
Goldberger, J.R. Conventionalization, civic engagement, and the sustainability of organic agriculture. <i>J. Rural Stud.</i> <b>2011</b> , 27, 288–296.	food system	agric. sc.
Goldman, A. Threats to sustainability in African agriculture: Searching for appropriate paradigms. <i>Hum. Ecol.</i> <b>1995</b> , 23, 291–334.	production	interdisc.
Gómez-Limón, J.A.; Sanchez-Fernandez, G. Empirical evaluation of agricultural sustainability using composite indicators. <i>Ecol. Econ.</i> <b>2010</b> , 69, 1062–1075.	production	econ.
Goodland, R. Environmental sustainability in agriculture: diet matters. <i>Ecol. Econ.</i> <b>1997</b> , 23, 189–200.	food system	interdisc.
Goodwin, N.R. Lessons for the world from US agriculture: Unbundling technology. <i>World Dev.</i> <b>1991</b> , 19, 85–102.	production	interdisc.
Hermans, F.; Horlings, I.; Beers, P.J.; Mommaas, H. The Contested Redefinition of a Sustainable Countryside: Revisiting Frouws' Rurality Discourses. <i>Sociol. Ruralis</i> <b>2010</b> , 50, 46–63.	food system	soc. & pol. sc.
Hermans, F.; Kok, K.; Beers, P.J.; Veldkamp, T. Assessing Sustainability Perspectives in Rural Innovation Projects Using Q-Methodology. <i>Sociol. Ruralis</i> <b>2012</b> , 52, 70–91.	food system	soc. & pol. sc.
Herndl, C.G.; Goodwin, J.; Honeycutt, L.; Wilson, G.; Graham, S.S.; Niederges, D. Talking Sustainability: Identification and Division in an Iowa Community. <i>J. Sustain. Agric.</i> <b>2011</b> , 35, 436–461.	production	human.

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Reference	Focus	Discipline
<i>Journal Articles</i>		
Hill, S.B. Redesigning agroecosystems for environmental sustainability: a deep systems approach. <i>Syst. Res. Behav. Sci.</i> <b>1998</b> , <i>15</i> , 391–402.	production	soc. & pol. sc.
Hiranandani, V. Sustainable agriculture in Canada and Cuba: a comparison. <i>Environ. Dev. Sustain.</i> <b>2010</b> , <i>12</i> , 763–775.	supply chain	soc. & pol. sc.
Horlings, I. Policy conditions for sustainable agriculture in the Netherlands. <i>Environmentalist</i> <b>1994</b> , <i>14</i> , 193–199.	supply chain	soc. & pol. sc.
Huang, S.-M. The articulation of culture, agriculture, and the environment of Chinese in northern Thailand. <i>Ethnology</i> <b>2005</b> , <i>44</i> , 1–11.	production	human.
Hyberg, B.; Setia, P. Economic and environmental tradeoffs in agricultural sustainability: A Perspective. <i>Int. Adv. Econ. Res.</i> <b>1996</b> , <i>2</i> , 41–46.	production	econ.
Ikerd, J. Sustainable Capitalism: A Matter of Ethics and Morality. <i>Probl. Ekorozw.</i> <b>2008</b> , <i>3</i> , 13–22.	food system	econ.
Izac, A.-M.N.; Swift, M.J. On agricultural sustainability and its measurement in small-scale farming in sub-Saharan Africa. <i>Ecol. Econ.</i> <b>1994</b> , <i>11</i> , 105–125.	production	agric. sc.
Johnson, R.B. Sustainable agriculture: Competing visions and policy avenue. <i>Int. J. Sustain. Dev. World Ecol.</i> <b>2006</b> , <i>13</i> , 469–480.	food system	interdisc.
Kaltoft, P. Values about Nature in Organic Farming Practice and Knowledge. <i>Sociol. Ruralis</i> <b>1999</b> , <i>39</i> , 39–53.	production	econ.
Karami, E.; Mansoorabadi, A. Sustainable agricultural attitudes and behaviors: a gender analysis of Iranian farmers. <i>Environ. Dev. Sustain.</i> <b>2008</b> , <i>10</i> , 883–898.	production	soc. & pol. sc.
Kasem, S.; Thapa, G.B. Sustainable development policies and achievements in the context of the agriculture sector in Thailand. <i>Sustain. Dev.</i> <b>2012</b> , <i>20</i> , 98–114.	food system	eng. & nat. sc.
Kloppenburger Jr., J.; Lezberg, S.; De Master, K.; Stevenson, G.W.; Hendrickson, J. Tasting food, tasting sustainability: Defining the attributes of an alternative food system with competent, ordinary people. <i>Hum. Org.</i> <b>2000</b> , <i>59</i> , 177–186.	food system	soc. & pol. sc.
Knight, C. Sustainable cocoa program. <i>Plant. Rech. Dev.</i> <b>1998</b> , <i>5</i> , 387–392.	supply chain	agric. sc.
Koohafkan, P.; Altieri, M.A.; Gimenez, E.H. Green Agriculture: foundations for biodiverse, resilient and productive agricultural systems. <i>Int. J. Agric. Sustain.</i> <b>2012</b> , <i>10</i> , 61–75.	food system	agric. sc.
Lancker, E.; Nijkamp, P. A policy scenario analysis of sustainable agricultural development options: A case study for Nepal. <i>Impact Assess. Proj. Apprais.</i> <b>2000</b> , <i>18</i> , 111–124.	production	econ.
Lee, D.R. Agricultural Sustainability and Technology Adoption: Issues and Policies for Developing Countries. <i>Am. J. Agric. Econ.</i> <b>2005</b> , <i>87</i> , 1325–1334.	production	econ.
Legg, W.; Viatte, G. Farming systems for sustainable agriculture. Available online: <a href="http://www.oecdobserver.org/news/archivestory.php/aid/508/Farming_systems_for_sustainable_agriculture.html">http://www.oecdobserver.org/news/archivestory.php/aid/508/Farming_systems_for_sustainable_agriculture.html</a> (accessed on 15 June 2015)	supply chain	soc. & pol. sc.
Lehman, H.; Clark, E.A.; Weise, S.F. Clarifying the definition of Sustainable agriculture. <i>J. Agric. Environ. Ethics</i> <b>1993</b> , <i>6</i> , 127–143.	production	human.
Levidow, L.; Birch, K.; Papaioannou, T. EU agri-innovation policy: two contending visions of the bio-economy. <i>Crit. Policy Stud.</i> <b>2012</b> , <i>6</i> , 40–65.	food system	soc. & pol. sc.
Liepins, R. Women in agriculture: advocates for a gendered sustainable agriculture. <i>Aust. Geogr.</i> <b>1995</b> , <i>26</i> , 118–126.	production	interdisc.

Table S1. Cont.

Reference	Focus	Discipline
<i>Journal Articles</i>		
Lin, Z.; Zebisch, M.A. Resource use and agricultural sustainability: Risks and consequences of intensive cropping in China. <i>J. Agric. Rural Dev. Trop. Subtrop. Suppl.</i> <b>2006</b> , <i>86</i> , 1–204.	production	agric. sc.
López-Aguilar, R.; Rodríguez-Quezada, G.; Naranjo-Murillo, A.; Beltrán Morales, L.F.; Troyo-Diéguez, E.E.; Casanova-Cruz, A.; Peralta-Patrón, O.; Troyo-Diéguez, E.E. Uso de yeso para una agricultura orgánica sustentable en zonas áridas y semiáridas. <i>Indian J. Dryland Agric. Res.</i> <b>2012</b> , <i>37</i> , 594–601.	production	eng. & nat. sc.
MacRae, R.J.; Henning, J.; Hill, S.B. Strategies to overcome barriers to the development of sustainable agriculture in Canada: The role of agribusiness. <i>J. Agric. Environ. Ethics</i> <b>1993</b> , <i>6</i> , 21–51.	production	econ.
Manuel-Navarrete, D.; Gallopín, G.C. Feeding the world sustainably: knowledge governance and sustainable agriculture in the Argentine Pampas. <i>Environ. Dev. Sustain.</i> <b>2012</b> , <i>14</i> , 321–333.	production	interdisc.
Matson, P.A.; Parton, W.J.; Power, A.G.; Swift, M.J. Agricultural Intensification and Ecosystem Properties. <i>Science</i> <b>1997</b> , <i>277</i> , 504–509.	production	eng. & nat. sc.
Maxey, L. Can we sustain sustainable agriculture? Learning from small-scale producer-suppliers in Canada and the UK. <i>Geogr. J.</i> <b>2006</b> , <i>172</i> , 230–244.	food system	interdisc.
Meares, A.C. Making the Transition from Conventional to Sustainable Agriculture: Gender, Social Movement Participation, and Quality of Life on the Family Farm1. <i>Rural Sociol.</i> <b>1997</b> , <i>62</i> , 21–47.	production	soc. & pol. sc.
Michelsen, J. Organic Farming in a Regulatory Perspective. The Danish Case. <i>Sociol. Ruralis</i> <b>2001</b> , <i>41</i> , 62–84.	food system	soc. & pol. sc.
Minarovic, R.E.; Mueller, J.P. North Carolina Cooperative Extension Service Professionals' Attitudes Toward Sustainable Agriculture. <i>J. Ext.</i> <b>2000</b> , <i>38</i> , Article 1.	production	soc. & pol. sc.
Morse, S.; McNamara, N.; Acholo, M. Soils, souls and agricultural sustainability: The need for connection. <i>Int. J. Sustain. Dev.</i> <b>2004</b> , <i>7</i> , 410–432.	production	interdisc.
Mouysset, L.; Doyen, L.; Jiguet, F.; Allaire, G.; Leger, F. Bio economic modeling for a sustainable management of biodiversity in agricultural lands. <i>Ecol. Econ.</i> <b>2011</b> , <i>70</i> , 617–626.	production	eng. & nat. sc.
Nousiainen, M.; Pylkkänen, P.; Saunders, F.; Seppänen, L.; Vesala, K.M. Are Alternative Food Systems Socially Sustainable? A Case Study from Finland. <i>J. Sustain. Agric.</i> <b>2009</b> , <i>33</i> , 566–594.	food system	soc. & pol. sc.
Ogaji, J. Sustainable Agriculture in the UK. <i>Environ. Dev. Sustain.</i> <b>2005</b> , <i>7</i> , 253–270.	food system	human.
Onwueme, I.C.; Borsari, B.; Leal Filho, W.D.S. An analysis of some paradoxes in alternative agriculture and a vision of sustainability for future food systems. <i>Int. J. Agric. Resour. Gov. Ecol.</i> <b>2008</b> , <i>7</i> , 199–210.	food system	eng. & nat. sc.
O'Riordan, T.; Cobb, D. Assessing the Consequences of Converting to Organic Agriculture. <i>J. Agric. Econ.</i> <b>2001</b> , <i>52</i> , 22–35.	supply chain	interdisc.
Paoletti, M.G.; Pimentel, D. The environmental and economic costs of herbicide resistance and host-plant resistance to plant pathogens and insects. <i>Technol. Forecast. Soc. Chang.</i> <b>1995</b> , <i>50</i> , 9–23.	production	eng. & nat. sc.

Table S1. Cont.

Reference	Focus	Discipline
<i>Journal Articles</i>		
Peter, G.; Bell, M.M.; Jarnagin, S.; Bauer, D. Coming Back Across the Fence: Masculinity and the Transition to Sustainable Agriculture*. <i>Rural Sociol.</i> <b>2000</b> , <i>65</i> , 215–233.	supply chain	soc. & pol. sc.
Peters, K.A. Creating a sustainable urban agriculture revolution. <i>J. Environ. Law Litig.</i> <b>2010</b> , <i>25</i> , 203–247.	supply chain	human.
Phillips, C.J.C.; Sorensen, J.T. Sustainability in cattle production systems. <i>J. Agric. Environ. Ethics</i> <b>1993</b> , <i>6</i> , 61–73.	production	agric. sc.
Pierce, J.T. Agriculture, sustainability and the imperatives of policy reform. <i>Geoforum</i> <b>1993</b> , <i>24</i> , 381–396.	production	interdisc.
Power, A.G. Linking Ecological Sustainability and World Food Needs. <i>Environ. Dev. Sustain.</i> <b>1999</b> , <i>1</i> , 185–196.	production	eng. & nat. sc.
Prasad, R. Sustainable agriculture and fertilizer use. <i>Curr. Sci.</i> <b>1999</b> , <i>77</i> , 38–43.	production	agric. sc.
Pretty, J.N. Alternative systems of inquiry for a sustainable agriculture. <i>IDS Bull.</i> <b>1994</b> , <i>25</i> , 37–48.	production	interdisc.
Pretty, J.N. Participatory learning for sustainable agriculture. <i>World Dev.</i> <b>1995</b> , <i>23</i> , 1247–1263.	production	interdisc.
Pretty, J.N. Sustainable agriculture, people and the resource base: impacts on food production. <i>Forum Dev. Stud.</i> <b>1997</b> , <i>1</i> , 7–32.	production	interdisc.
Pretty, J.N. Can Sustainable Agriculture Feed Africa? New Evidence on Progress, Processes and Impacts. <i>Environ. Dev. Sustain.</i> <b>1999</b> , <i>1</i> , 253–274.	supply chain	interdisc.
Pretty, J.N. Towards sustainable food and farming systems in industrialized countries. <i>Int. J. Agric. Resour. Gov. Ecol.</i> <b>2000</b> , <i>1</i> , 77–94.	supply chain	interdisc.
Psarikidou, K.; Szerszynski, B. Growing the social: alternative agrofood networks and social sustainability in the urban ethical foodscape. <i>Sustain. Sci. Pract. Policy</i> <b>2012</b> , <i>8</i> , 30–39.	production	soc. & pol. sc.
Ramakrishnan, P. Sustainable Agriculture and Food Security: India-China Context. <i>China Rep.</i> <b>2007</b> , <i>43</i> , 219–229.	production	interdisc.
Ramanjaneyulu, G.V. Adapting Smallholder Agriculture to Climate Change. <i>IDS Bull.</i> <b>2012</b> , <i>43</i> , 113–121.	production	agric. sc.
Rasul, G.; Thapa, G.B. Sustainability Analysis of Ecological and Conventional Agricultural Systems in Bangladesh. <i>World Dev.</i> <b>2003</b> , <i>31</i> , 1721–1741.	production	eng. & nat. sc.
Reganold, J.P.; Papendick, R.I.; Parr, J.F. Sustainable Agriculture. <i>Sci. Am.</i> <b>1990</b> , <i>262</i> , 112–120.	production	agric. sc.
Reganold, J.P.; Glover, J.D.; Andrews, P.K.; Hinman, H.R. Sustainability of three apple production systems. <i>Nature</i> <b>2001</b> , <i>410</i> , 926–930.	production	agric. sc.
Rezaei-Moghaddam, K.; Karami, E. A multiple criteria evaluation of sustainable agricultural development models using AHP. <i>Environ. Dev. Sustain.</i> <b>2008</b> , <i>10</i> , 407–426.	supply chain	soc. & pol. sc.
Rigby, D.; Woodhouse, P.; Young, T.; Burton, M. Constructing a farm level indicator of sustainable agricultural practice. <i>Ecol. Econ.</i> <b>2001</b> , <i>39</i> , 463–478.	production	econ.
Robinson, G.M. Towards Sustainable Agriculture: Current Debates. <i>Geogr. Compass</i> <b>2009</b> , <i>3</i> , 1757–1773.	food system	soc. & pol. sc.
Rosset, P.M.; Altieri, M.A. Agroecology vs. input substitution: A fundamental contradiction of sustainable agriculture. <i>Soc. Natl. Resour.</i> <b>1997</b> , <i>10</i> , 283–295.	supply chain	soc. & pol. sc.

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Reference	Focus	Discipline
<i>Journal Articles</i>		
Saifi, B.; Drake, L. A coevolutionary model for promoting agricultural sustainability. <i>Ecol. Econ.</i> <b>2008</b> , <i>65</i> , 24–34.	supply chain	soc. & pol. sc.
Saltiel, J.; Bauder, J.W.; Palakovich, S. Adoption of Sustainable Agricultural Practices: Diffusion, Farm Structure, and Profitability <sup>1</sup> . <i>Rural Sociol.</i> <b>1994</b> , <i>59</i> , 333–349.	production	
Sharma, T.; Carmichael, J.; Klinkenberg, B. Integrated modeling for exploring sustainable agriculture futures. <i>Futures</i> <b>2006</b> , <i>38</i> , 93–113.	production	interdisc.
Shepherd, J. Creating whose future: Sustainable agricultural policy for Australia? <i>Int. J. Environ. Cult. Econ. Soc. Sustain.</i> <b>2011</b> , <i>7</i> , 377–395.	supply chain	interdisc.
Shi, T. Applying a holistic approach to agricultural sustainability research: A methodological synthesis of ecological economics and system dynamics. <i>J. Interdiscip. Econ.</i> <b>2004</b> , <i>16</i> , 77–93.	production	econ.
Shi, T.; Gill, R. Developing effective policies for the sustainable development of ecological agriculture in China: the case study of Jinshan County with a systems dynamics model. <i>Ecol. Econ.</i> <b>2005</b> , <i>53</i> , 223–246.	production	econ.
Smith, N.J.H. Strategies for Sustainable Agriculture in the Tropics. <i>Ecol. Econ.</i> <b>1990</b> , <i>2</i> , 311–323.	production	interdisc.
Tait, J.; Morris, D. Sustainable development of agricultural systems: competing objectives and critical limits. <i>Futures</i> <b>2000</b> , <i>32</i> , 247–260.	production	soc. & pol. sc.
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Table S1. Cont.

Reference	Focus	Discipline
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**Table S1. Cont.**

Reference	Focus	Discipline
<i>Grey Literature</i>		
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**Table S2.** Description of the categories of the sustainable agriculture framework.

Category	Description
<b>Goals</b>	
<i>Overarching Goals</i>	
Ethics	Summarizes all statements that point out that those values that are broadly considered to be morally good have to be upheld and followed also in Sustainable Agriculture. Among these, the frequently mentioned values are stewardship, humaneness, solidarity, respecting human rights and priority of needs instead of greed. <i>"[H]umaneness to animals is an important, positive aspect of sustainable animal and mixed farming."</i> [1] <i>"Vorley (2002) defined agricultural sustainability as not only economic sustainability but also environmental, social and ethical sustainable sustainability."</i> [2]
Multifunctionality	Summarizes all statements that point out that Sustainable Agriculture has to perform a variety of functions from different areas/dimensions simultaneously (see category group "goals" to see which functions it has to perform: production of food, environmental protection, providing income, etc.). <i>Sustainable agriculture is "one that is purposefully multifunctional and highly productive ..."</i> [3] <i>"[S]ustainability is visualised as the ability of agriculture to fulfil simultaneously a range of desirable objectives"</i> [4]
Safety	Summarizes all statements that call for Sustainable Agriculture to be of low or no risk to life and health of humans, animals and the environment in general. There should also be no risk to the economic situation of stakeholders. <i>"An international Working Group (Smyth &amp; Dumanski 1993) has viewed maintenance or enhancement of productivity, reduced risk, ... essential condition for sustainable land management"</i> [5] <i>"In industrialized country contexts, the challenges relate more to reducing costs, improving food safety, environmental amenities and nutritional values (World Bank 2008)."</i> [6]
Stability & Resilience	Summarizes all statements that point out that for Sustainable Agriculture agrifood systems or parts of them have to fulfill its functions in a reliable way, by being resistant to or by recovering quickly from shocks and disturbances and continuing for a long time. <i>"Sustainability in agricultural systems is viewed in terms of resilience (the capacity of systems to buffer shocks and stresses) and persistence (the capacity of systems to carry on)"</i> [7] <i>"In the agri-ruralist discourse, sustainability is directly linked to the family farm scale and, more specifically, to the continuity of the farm."</i> [8]

Table S2. Cont.

Category	Description
Goals	
<i>Environmental Goals: Production-Specific</i>	
Ecological Soundness	<p>Summarizes all statements that point out that that Sustainable Agriculture must be environmentally or ecologically friendly in a physical sense.</p> <p>(This category is part of both the group “Environmental Goals: Production-Specific” and “Environmental Goals: Non-Production-Specific”)</p> <p><i>“Discussions of sustainable agriculture frequently define it as ‘ecologically sound, economically viable, and socially just,’ or some variant on that phrase.” [1]</i></p> <p><i>“[S]ustainable agricultural systems use ‘the best available technology’ in a balanced, well-managed, and environmentally responsible manner (Hess 1991).” [9]</i></p>
Ecosystem Function Conservation	<p>Summarizes all statements that emphasize that sustainable agriculture has to maintain the biological processes that sustain ecosystems and generate ecosystem services and benefits.</p> <p>Both this category and the category “Natural Resource Conservation” are actually components of the category “Productive Capacity”. They are kept as separate categories here, however, because they are mentioned very frequently in the examined literature and thus seem to be of great significance on their own. Having SAID that, it is worthwhile to assess differences in the significance of these categories, which would not be possible if they were incorporated into the overarching category “Productive Capacity”.</p> <p><i>“As a consequence, a crucial component of sustainability, as defined in terms of the resilience of an agricultural system to external stresses and shocks, is maintaining the environmental resources and ecological functions upon which the system depends.” [10]</i></p> <p><i>“We define sustainable agriculture as practices that meet current and future societal needs for food and fibre, for ecosystem services, ...” [11]</i></p>
Natural Resource Conservation	<p>Summarizes all statements that point out that Sustainable Agriculture has to conserve the natural resources, which agricultural production depends on.</p> <p><i>“sustainable agriculture involves the use of natural resources to satisfy changing human needs while maintaining or enhancing the natural resource base and avoiding environmental degradation (Firebaugh, 1990).” [12]</i></p> <p><i>“The main goals in sustainable agriculture are natural resources protection and improvement ...” [13]</i></p>
Productive Capacity	<p>Summarizes statements that emphasize that Sustainable Agriculture has to maintain the ability of agricultural systems to produce.</p> <p><i>“sustainable agriculture is defined as any collection of agricultural practices which leaves the productive potential of the resource base at least as great as it was when those practices were initiated.” [14]</i></p> <p><i>“Altieri (1989) defines sustainable agriculture as a system which should aim to maintain production in the long run...” [15]</i></p>

Table S2. Cont.

Category	Description
Goals	
<i>Environmental Goals: Non-Production-Specific</i>	
Ecological Soundness	<p>Summarizes all statements that point out that Sustainable Agriculture must be environmentally or ecologically friendly in a physical sense.</p> <p>(This category is part of both the group “Environmental Goals: Production-Specific” and “Environmental Goals: Non-Production-Specific”)</p> <p><i>“[A] sustainable agriculture must be ecologically sound, economically viable, and socially just (Ikerd 1992)” [16]</i></p> <p><i>“WWF is concerned with promoting sustainable agriculture, which is defined as ensuring the production of safe, affordable and healthy food and fibre in ways that are ecologically responsible, economically viable and socially equitable.” [17]</i></p>
Animal Well-Being	<p>Summarizes all statements that point out that Sustainable Agriculture has to ensure the general health and happiness of animals, especially of farm animals. This includes, for example, living conditions and diet appropriate to the needs of the animals or a treatment that does not cause harm or suffering to the animals.</p> <p><i>“Sustainable agriculture is a way of raising food that is healthy for consumers and animals...” [18]</i></p> <p><i>“To be sustainable in the short term, cattle production systems must fulfil the requirements of ... minimum divergence from the welfare needs of the cattle.” [19]</i></p>
Env Conservation and Improvement	<p>Summary of all statements that call for the improvement or protection of the physical components of the space in which people, animals and plants live from (further) deterioration. Here, “environmental conservation” refers to the environment at large, in its importance for society as a whole.</p> <p><i>“Sustainable agriculture is defined as successful management of the resources of agriculture to satisfy changing human needs, to conserve the environment and increase biological resources (Karami and Mansoorabadi, 2008).” [20]</i></p> <p><i>“Nature and biodiversity are protected and enhanced.” [21]</i></p>
Harmony with Nature	<p>Summarizes all statements that argue that Sustainable Agriculture has to be based on an attitude of care for and peaceful existence with and within nature. Also contains those statements that even claim that nature should be placed at the center of all considerations for sustainable agriculture (ecocentrism).</p> <p><i>“[M]otives to work within the natural order appear to allow the concept of sustainable agriculture to exist.” [22]</i></p> <p><i>“Alternative ideologies, such as those of organic agriculture, focus on the values underlying a vision of sustainability based on the preservation of an idyllic agrarian way of life: harmony with nature...” [4]</i></p>
<i>Social Goals</i>	
Social Responsibility	<p>Summarizes all statements that emphasize that Sustainable Agriculture has to be carried out in a way that it benefits society at large and statements pointing out that sustainable agriculture has to be possible and livable for people working and living with it.</p> <p><i>“Sustainable agriculture seeks to achieve three main goals: economic efficiency, environmental quality and social responsibility.” [23]</i></p> <p><i>“A desirable end-point for both modern and pre-modern agricultural systems is clearly some design that enhances ... the public benefits through other functions.” [24]</i></p>

Table S2. Cont.

Category	Description
<b>Goals</b>	
Acceptability	<p>Summarizes statements arguing that Sustainable Agriculture has to be socially acceptable.</p> <p><i>“A major pre-requisite for attaining sustainable agricultural development ... is the formulation of appropriate renewable resource management policies which are supported by the farming communities and to which they are willing and able to respond (World Bank 1988, Odemerho 1992)” [25]</i></p> <p><i>“[E]nsure that the resulting farm practice is acceptable to the balance of aesthetic tastes.” [26]</i></p>
Cultural Preservation	<p>Summarizes all statements that emphasize that Sustainable Agriculture has to contribute to the preservation and enhancement of customs and beliefs, arts and aesthetics, way of life and forms of social organization in the rural space.</p> <p><i>“At the local level, agricultural sustainability is associated with ... promotion of local institutions, culture and farming communities.” [7]</i></p> <p><i>“[T]he three corner stones of sustainable agriculture ... rest upon a foundation of inter-generational equity which in turn has its foundation in human spirituality.” [15]</i></p>
Equity, Justice, Fairness	<p>Summarizes all statements that point out that in and for Sustainable Agriculture, everybody has to be treated in a morally right way that does not favor one person over another.</p> <p><i>“Cai and Smith (1994) have also suggested that agricultural sustainability should be assessed from the perspectives of ecological soundness, social acceptability and economic viability. [...] ‘[S]ocial acceptability’ refers to self-reliance, equality and improved quality of life” [27]</i></p> <p><i>“[T]he three corner stones of sustainable agriculture ... rest upon a foundation of inter-generational equity” [15]</i></p>
Fulfillment of Human Needs	<p>Summarizes all statements that contend that it is one goal of Sustainable Agriculture to fulfill human needs in the present and the future.</p> <p><i>“Sustainable agriculture is defined as successful management of the resources of agriculture to satisfy changing human needs” [20]</i></p> <p><i>“Sustainable agriculture ... must be capable of meeting the needs of the present without compromising the future.” [28]</i></p>
Good Working Conditions	<p>Summarizes all statements that claim that Sustainable Agriculture has to provide such work conditions that those who are occupied with it can continue working in agriculture for a long time.</p> <p><i>“Policies and programs are needed to address this problem, working toward socially just and safe employment that provides adequate wages, working conditions ...” [29]</i></p> <p><i>“Workers are treated fairly and paid competitive wages and benefits. They work in a safe environment and are offered proper living conditions and food.” [18]</i></p>
Human Health	<p>Summarizes statements that point out that Sustainable Agriculture has to ensure the protection and enhancement of the physical well-being of all people that get into contact with agriculture and its products.</p> <p><i>“ensure the health of workers, rural populations and consumers” [30]</i></p> <p><i>“Agriculture policy and investment will be smarter to focus on improved human health and access to nutrition, and not only on increasing food supply.” [31]</i></p>

Table S2. Cont.

Category	Description
<b>Goals</b>	
Nourishment	<p>Summarizes all statements arguing that Sustainable Agriculture has to provide sufficient amounts of food that supports human health at all times and to all people.</p> <p><i>“this paradigm has the backing of industry, and according to its advocates, no other form of agriculture could possibly feed the world—unarguably a vital prerequisite for an agricultural system claiming to be sustainable.”</i> [32]</p> <p><i>“Sustainable agriculture is fundamentally necessitated by the need to satisfying human food needs, which is to responsibly produce sufficient nutritious food to ensure food security.”</i> [33]</p>
Quality of Life	<p>Contains all statements that call for Sustainable Agriculture to provide self-fulfillment and a good quality of life, especially for those individuals involved in agriculture but also for society in general. More exactly, sustainable agriculture should contribute to "a good, happy human life [...] a life well lived, a life that is deeply satisfying, fruitful, and worthwhile" [34].</p> <p><i>“We also identified two other elements as critical parts of these women's alternative agriculture paradigm: quality family life and spirituality.”</i> [35]</p> <p><i>“[U]rban gardens allow residents of inner areas to experience the joy and satisfaction of producing nutritious food in their own neighborhoods.”</i> [36]</p>
Strong Communities	<p>Summarizes all statements that argue that Sustainable Agriculture has to strengthen rural communities in their social relations and organization.</p> <p><i>“The main goals in sustainable agriculture are ... empowering of socioeconomic structure of rural communities (Shepherd, A. 1998).”</i> [13]</p> <p><i>“Sustainable agriculture is contrasted with market-driven economic growth in that it is explicitly concerned with “normative” values such as ... cohesive rural communities (Pretty 1995, 1).”</i> [37]</p>
<b>Economic Goals</b>	
Economic Viability	<p>Summarizes all statements that point out that Sustainable Agriculture also has to be able to be carried out and continued from an economic point of view. This implies that Sustainable Agriculture should be, among other things productive, competitive and profitable.</p> <p><i>“Another perspective on economic sustainability in agriculture focuses on the economic performance and viability of farming.”</i> [38]</p> <p><i>“[A]griculture is not sustainable unless it is profitable.”</i> [39]</p>
Development	<p>Summarizes all statements that point out that a Sustainable Agriculture has to contribute to the improvement of economic and living conditions of people, especially in the rural areas.</p> <p><i>“Rao and Rogers (2006) defined sustainable agriculture as a practice that meets current and long-term needs ... of society while maximizing net benefits through the conservation of resources to maintain ... long-term human development.”</i> [2]</p> <p><i>“[I]ntegrate the concept of agricultural sustainability into poverty reduction”</i> [7]</p>
Livelihood	<p>Summarizes all statements that argue that Sustainable Agriculture has to provide the basis of sustenance for farmers, rural workers and their respective families.</p> <p><i>“The Food and Agricultural Organisation (FAO) of the United Nations has tried to offer a more specific description of sustainable agricultural as a development path in which resource use and environmental management are combined with ... secure livelihoods”</i> [40]</p> <p><i>“But no matter how elegant the system or how accomplished the farmer, no agriculture is sustainable if it’s not also ... able to provide a healthy family income”</i> [41]</p>

Table S2. Cont.

Category	Description
<b>Goals</b>	
Provision of Products	<p>Summarizes all statements that state that sustainable agriculture has to produce different material and immaterial outputs (food, fibers, fuels, medicine, services...).</p> <p>Although a great amount of the statements summarized in this category calls for the production of food, this category is different from the category of nutrition. The production of food is a necessary but not a sufficient condition for guaranteeing the nutrition of all people and some authors alert that more attention should be paid to better nutrition (<i>i.e.</i>, better quality, diversity and distribution of the food) rather than to merely increasing absolute food production (e.g., [31]).</p> <p><i>“[A] cropping system is sustainable if it has an acceptable level of production of harvestable yield”</i> [42]</p> <p><i>“A ‘dark green’ approach to sustainability suggests priorities for agricultural systems that help to build important natural and social assets whilst producing more food.”</i> [7]</p>
Thriving Economy	<p>Summarizes all statements emphasizing that Sustainable Agriculture has to support a thriving economy in the rural space, <i>i.e.</i>, an economy that generates for example employment, growth and well-going rural businesses.</p> <p><i>“Economic development policies are needed that encourage more diversified agricultural production on family farms as a foundation for healthy economies in rural communities.”</i> [29]</p> <p><i>“This argument is also supported by Pretty et al. (2008), where the authors indicate that the best approach to analysing agricultural sustainability is to assess it through the lens of economic growth, environmental protection and social progress.”</i> [2]</p>
<b>Strategies</b>	
<i>Adaptive Management</i>	
Adaptation	<p>Summarizes all statements that indicate that all strategies and practices for Sustainable Agriculture have to be able to exist and be used in the context of the specific natural, social, economic, political, cultural etc. conditions of a specific spatial and temporal situation without causing problems.</p> <p><i>“[F]or agriculture to be sustainable it must be compatible with the socio- political environment within which it operates.”</i> [38]</p> <p><i>“[P]romoting agricultural sustainability may demand strengthened coevolutionary processes on the local level”</i> [43]</p>
Learning	<p>Summarizes all statements that emphasize that Sustainable Agriculture requires learning by agricultural stakeholders, especially joint/social learning.</p> <p><i>“A central principle about sustainable agriculture is that it must enshrine some of these new ways of learning about the world.”</i> [44]</p> <p><i>“The transition to sustainable agriculture, therefore, needs networks of farmers who can jointly engage in learning and experimentation.”</i> [45]</p>
Management, Integration & Redesign	<p>Summarizes all statements that emphasize that Sustainable Agriculture has to be based on complex management, <i>i.e.</i>, handling production and other agriculture-related activities rather by finding alternative ways of organizing the systems (redesign) as well as using a variety of techniques and approaches (integration) than by applying solutions that appear simple but lead to problems themselves (e.g., to control pests, rather apply a complex and diversified crop rotation system than pesticides).</p> <p><i>“Sustainable agriculture ... emphasizes design and management procedures that work with natural processes”</i> [46]</p> <p><i>“Sustainable agriculture requires integrated, but not unitary, policy measures.”</i> [26]</p>

Table S2. Cont.

Category	Description
<b>Strategies</b>	
Prevention	<p>Summarizes all statements that emphasize that for Sustainable Agriculture, problems have to be anticipated and their occurrence avoided, which also requires accounting for uncertainties.</p> <p><i>“Thereafter, we define ... two characteristics of sustainable agricultural systems: ‘prevention’ and ‘direct marketing’ [47]</i></p> <p><i>“[A]ppropriate resource use in sustainable agriculture should be rationalised in a manner which considers ... unanticipated problems.” [33]</i></p>
Substitution	<p>Summarizes all statements that argue that for Sustainable Agriculture, the use of unsustainable technologies, resources, approaches etc. has to be replaced by the application of more sustainable ones.</p> <p><i>“In sustainable agricultural systems, there is ... a substitution of renewable sources or labor to the extent that is economically feasible.” [29]</i></p> <p><i>“Shallow sustainability focuses on efficiency and substitution strategies” [48]</i></p>
<b>Cooperation</b>	
Collaboration & Communication	<p>Summarizes all statements that call for enhanced and improved social interaction among and between the different agricultural stakeholder groups in the sense of exchange, coordination and joint action in order to realize Sustainable Agriculture.</p> <p><i>“The cultural basis of sustainability means accommodating to the interests of all relevant stakeholders in such a way that neighbouring farms co-ordinate management practices” [26]</i></p> <p><i>“Second, we need to put in place a supportive policy and governance environment, which enhances social capital and knowledge exchange (Pretty et al. 2011).” [49]</i></p>
Participation	<p>Summarizes all statements which point out that Sustainable Agriculture requires that agricultural stakeholders have a greater say in relevant decisions.</p> <p><i>“Local efforts to enhance political participation must therefore be part of sustainable agricultural strategies” [50]</i></p> <p><i>“It is important from a democratic point of view that farmers have a voice in formulating the long-term development of the agricultural sector, and in the process of political decision making.” [51]</i></p>
<b>Ecology-based Strategy</b>	
Diversification	<p>Statements that call for the maintenance and enhancement of variety in many different aspects of Sustainable Agriculture such as species, varieties and breeds of domesticated plants and animals; products and production activities; sources of income; technologies; etc.</p> <p><i>“Diversification in this context should therefore imply not only a diversification of crops ... but also a diversification of other farm management skills and socio-institutional resources” [50]</i></p> <p><i>“Farmers and ranchers can boost their financial sustainability by using a greater diversity of marketing techniques” [52]</i></p>
Ecological Principles	<p>Summarizes all statements that claim that Sustainable Agriculture has to respect and apply principles of ecosystem functioning.</p> <p><i>“In practice this means, that the ecological farmer in order to design sustainable systems is an imitator of nature.” [47]</i></p> <p><i>“They attempt to develop a sustainable system for food production and consumption, based on the idea of the farm as a ... self-regulating ... whole” [53]</i></p>



Table S2. Cont.

Category	Description
Strategies	
<i>Economics-based Strategy</i>	
Capital Asset Maintenance	<p>Summarizes all statements that point out that sustainable agriculture has to strive for such a use of all kinds of capital assets (natural, social, human, <i>etc.</i>) that allows their conservation or even enhancement instead of their (mere) consumption.</p> <p><i>"This suggests that maintaining 'environmental capital' is at least a condition of sustainability."</i> [10]</p> <p><i>"Most attention tends to be given to the environmental dimension, including the reproduction of natural capital."</i> [54]</p>
Demand-Orientation	<p>Summarizes all statements emphasizing that production and resource use have to be according to actual demand in Sustainable Agriculture.</p> <p><i>"In a soil fertility context, sustainable agriculture seeks to maintain the balance between nutrients being removed by crops or animal produce and inputs from fertilisers and nutrient recycling."</i> [39]</p> <p><i>"Sustainable Agriculture has to ... produce adequate quantities of good quality, safe food"</i> [55]</p>
Efficiency	<p>Summarizes all statements that emphasize that Sustainable Agriculture - and especially its production - has to be carried out well without wasting any kind of resources.</p> <p><i>"This goal requires an efficient use of technology in a manner conducive to sustainability."</i> [15]</p> <p><i>"Sustainable agriculture in the utilitarian discourse is defined well within the limits of the market. The foremost concerns are cost-price efficiency"</i> [8]</p>
Quality-Orientation	<p>Summarizes all statements that emphasize that Sustainable Agriculture has to be quality-oriented, especially regarding its products.</p> <p><i>"Sustainable agriculture produces diverse forms of high quality foods, fibers and medicines."</i> [48]</p> <p><i>"To be sustainable, a farm must produce adequate yields of high quality"</i> [56]</p>
<i>Holistic &amp; Complex Systems Thinking</i>	
Long-Term Perspective	<p>Summarizes all statements emphasizing that a long-term perspective needs to be taken in considerations for Sustainable Agriculture.</p> <p><i>"With a view to the emphasis on the need for long term planning under the rubric of sustainability"</i> [57]</p> <p><i>"In the agricultural context this view seeks to balance long term agricultural sustainability with economic viability, reduction of environmental harm, and fulfilling public demands for food and landscape benefits derived from agriculture."</i> [58]</p>
Scale-Sensitivity	<p>Summarizes all statements that draw attention to the necessity of considering causes and effects on all relevant scales and choosing an appropriate scale for analysis and action for Sustainable Agriculture.</p> <p><i>"Technology matters most if it is affordable and if it is appropriate to scale and conditions."</i> [31]</p> <p><i>"Landscape-scale management holds significant potential for reducing off-site consequences of agriculture."</i> [11]</p>
Systemic Thinking	<p>Summarizes all statements that emphasize that Sustainable Agriculture needs systemic approaches and thinking, <i>i.e.</i>, being holistic and considering the various interdependencies, dynamics and interactions between the components of agricultural or agrifood systems.</p> <p><i>"The essentials are seeing the land a living system"</i> [59]</p> <p><i>"Hilistic [sic!] thinking in planning and execution of all aspects of sustainable agriculture; i.e., a systems approach."</i> [60]</p>

Table S2. Cont.

Category	Description
<b>Strategies</b>	
<i>Knowledge &amp; Science</i>	
Innovation	Summarizes all statements that express that Sustainable Agriculture has to build on new, alternative and improved approaches and statements calling for (technological, political...) change. <i>"Sustainability needs perpetual novelty and adaptive performance."</i> [45] <i>"Successful sustainable farming futures are seen to be dependent on ... significant changes in the wider economic, social and institutional environment (Pierce, 1996: 228)."</i> [26]
Modern	Summarizes all statements that argue in favor of the application of knowledge, methods and achievements of modern times and science for Sustainable Agriculture. <i>"Sustainable agriculture ... calls for a cautious blending of traditional and modern farm practices"</i> [37] <i>"Sustainable intensification via smart inputs from lab knowledge"</i> [61]
Traditional	Statements arguing that Sustainable Agriculture requires the application of traditional and indigenous knowledge, methods and practices. <i>"Sustainable agriculture ... calls for a cautious blending of traditional and modern farm practices"</i> [37] <i>"Maximum use of internal resources, including indigenous knowledge and practices"</i> [27]
<i>Subsidiarity</i>	
Decentralization	Summarizes all statements that claim that Sustainable Agriculture has to be organized in a less centralized and concentrated way, which also implies smaller units. <i>"[I]t is also consistent with one of the core philosophical principles of sustainable agriculture, namely, the need for dispersed production"</i> [62] <i>"[A]lternative agriculturalists advocate smaller farm units and technology"</i> [63]
Independence	Summarizes all statements that argue that systems of Sustainable Agriculture should be (more) independent, self-reliant, self-sufficient, autonomous etc. from various external economic factors. <i>"greater self-reliance for farmers and rural populations"</i> [2] <i>"Urban agriculture provides food security for urban residents by promoting self-sufficiency."</i> [36]
Local/Regional	Summarizes all statements that argue that Sustainable Agriculture requires a greater focus on and strengthening of the local and regional level. <i>"Off the farm, consumers and grassroots activists are working to create local markets and farm policies that support sustainable practices."</i> [41] <i>"From a sustainability framework, the optimum policy is to consume food that is produced as locally as possible" (Lang and Rayner 2002: 36)."</i> [32]
<b>Fields of Action</b>	
<i>Agrifood System</i>	
Consumption	Summarizes all statements that point out that patterns of leading our lives and consuming need to be adapted in order to achieve a Sustainable Agriculture. Also includes suggestions in which ways these patterns would have to be changed. <i>"On one hand, sustainable agriculture draws vitality from its being an expression of some strongly held values and concerns: ... preferences for high-quality and healthy food"</i> [64] <i>"This view presupposes that future farming systems must accept these ecosystem-imposed limits on the number of people in the world and the lifestyle they can enjoy."</i> [58]

Table S2. Cont.

Category	Description
<b>Strategies</b>	
Production	<p>Summarizes suggestions for ways in which agricultural production should be carried out in a Sustainable Agriculture, especially relating to the quantities that agriculture should produce to be sustainable.</p> <p><i>“The products that are produced with sustainable agriculture are more diverse”</i> [65]</p> <p><i>“A growing world population makes it necessary to increase food production”</i> [8]</p>
Supply Chain	<p>Summarizes all suggestions for improving and rearranging the supply chain (here used for all parts of the supply chain excluding agricultural production and consumption, which are treated in own categories as they gain special attention in the literature) in order to facilitate sustainable agriculture.</p> <p><i>“Significantly reduce waste along the entire food chain.”</i> [31]</p> <p><i>“Sustainable farming ... employs marketing practices that reduce the distance between production and consumption locations (Ritchie 1994).”</i> [66]</p>
<i>Management &amp; Technological Solutions</i>	
Crops & Livestock	<p>Summarizes all statements that suggest that new types of crops and livestock as well as improved varieties and breeds of already used crops and animals are needed for Sustainable Agriculture.</p> <p><i>“Crop varieties with enhanced resistance or tolerance to insect pests and crop pathogens.”</i> [60]</p> <p><i>“Use of local and improved crop varieties and livestock breeds”</i> [67]</p>
Management Tools	<p>Summarizes all statements that suggest the application of certain general management tools in decision making at all levels in order to achieve Sustainable Agriculture, e.g., indicators, monitoring, planning, decision-support tools etc.</p> <p><i>“These decision-support tools are essential in guiding agriculture towards sustainability (Hansen. 1996).”</i> [68]</p> <p><i>“A key element for any policy document aiming to ensure the transition towards sustainable agriculture is the setting of suitable goals, with clear targets and indicators to measure the progress towards sustainable agriculture (Bell and Morse 1999; Stevenson and Lee 2001).”</i> [32]</p>
Resource Use	<p>Summarizes all statements that suggest which kind of resources should be used in which way for Sustainable Agriculture.</p> <p><i>“Self-sufficiency through preferred use of on-farm or locally available “internal” resources to purchased “external” resources”</i> [69]</p> <p><i>“The upper end of the sustainability scale sees a sustainable approach to wool production as one that: ... does not rely on oil or oil-derived chemicals (such as pesticides and artificial fertilisers); recycles and reuses resources, uses renewable energy sources”</i> [70]</p>
Technology & Practices	<p>Summarizes all statements that suggest which agricultural techniques and technologies should be used in which way in order to achieve Sustainable Agriculture.</p> <p><i>“[T]here is no need for any Luddite abandonment of technology as part of sustainable agriculture.”</i> [22]</p> <p><i>“Avoid the unnecessary use of agrochemical and other technologies that adversely impact on the environment and on human health”</i> [67]</p>
<i>Social &amp; Environmental Challenges</i>	
Emission-Reduction	<p>Summarizes statements that suggest that Sustainable Agriculture needs to reduce harmful emissions.</p> <p><i>“Reduce the ecological footprint of production, distribution and consumption practices. Thereby minimizing GHG emissions and soil and water pollution.”</i> [67]</p> <p><i>“These approaches ... are also less energy intensive and less polluting”</i> [71]</p>

Table S2. Cont.

Category	Description
<b>Strategies</b>	
Global Trends	<p>Summarizes all statements pointing out that realizing Sustainable Agriculture requires addressing and adapting to global development trends (such as population growth or climate change).</p> <p><i>“While measures and policies need to be put in place to reduce gas emissions from the agricultural sector (e.g., more efficient farming practices, reduced input use), mitigation alone is not sufficient. There is a need to work on adaptation measures to reduce the vulnerability of the agricultural sector to climate change, as well as promote opportunities associated with climate change.”</i> [17]</p> <p><i>“A sustainable food production system must keep pace with increasing demands (domestic or global) for food, which are due to continued population increases and improvement in per capita income in less developed countries (Grigg, 1986; Crosson, 1992)”</i> [38]</p>
<i>Social &amp; Human Capital</i>	
Knowledge, Education, Skills	<p>Summarizes all statements about use and improvement of knowledge, education and skills of farmers but also of consumers, policy makers, extension professionals etc. for Sustainable Agriculture.</p> <p><i>“provide technical assistance and capacity-building for ministries of agriculture and natural resource management”</i> [7]</p> <p><i>“In other words, human capital on the farm (and knowing how to stimulate that capital) is of primary importance.”</i> [23]</p>
Organization	<p>Summarizes all statements that call for better organization of agricultural stakeholders for cooperation and representation of their interests.</p> <p><i>“Integral to this participation is strong organisation of the local peasantry.”</i> [50]</p> <p><i>“Since sustainable agriculture research and education is not 'business as usual,' research and Extension activities should include the following methodologies: ... (c) networking, coalition building”</i> [72]</p>
Research & Development	<p>Summarizes all statements about the kind of research and development that is needed for Sustainable Agriculture.</p> <p><i>“Reinforcing such analyses and examining forms of farming allowing for the joint sustainability of biodiversity and agricultural production require interdisciplinary research.”</i> [73]</p> <p><i>“We remain convinced that the question of the high labour cost for organic production can best be addressed in the long term through research.”</i> [62]</p>
<i>Social, Political &amp; Economic Environment</i>	
Accessibility	<p>Summarizes all statements that point out that it is necessary to provide access for everybody to means of production, marketing and distribution and to "life support" (especially food and water) in order to achieve the goals of Sustainable Agriculture.</p> <p><i>“Conway and Barbier (1990) opined that farmers' access to appropriate knowledge, production inputs and commodity markets play influential roles in agricultural development.”</i> [12]</p> <p><i>“Clear tenure rights are necessary to promote equitable access to resources as well as sustainable management.”</i> [6]</p>
Economic System	<p>Summarizes all suggestions for improving and rearranging the way economic activities are carried out and goods and services are valued.</p> <p><i>“Sustainable agricultural development must be seen from a holistic perspective and more ecological economics principles need to be integrated into its practice.”</i> [74]</p> <p><i>“And it [sustainability] must be reinforced by market processes, such as pricing which reflects social and ecological costs of production and environmental values (Fairtrade Foundation, 2010).”</i> [59]</p>

**Table S2. Cont.**

Category	Description
Strategies	
Infrastructure	Summarizes all statements that point out that Sustainable Agriculture needs an improved infrastructure (of various kinds) in rural spaces. <i>“Invest public resources in essential public goods, including innovation and infrastructure”</i> [6] <i>“Farmers in developing countries need ... better agricultural infrastructure”</i> [75]
Investment	Summarizes statements about investments needed for the realization of Sustainable Agriculture from both private and public sources. <i>“[M]ore sustainable systems will call for much greater public investment at global, regional and national levels aimed at expanding research and extension to underpin the shift to more sustainable systems.”</i> [6] <i>“These goals might be realised through farm structure expansions or technological investments.”</i> [33]
Policy & Institutions	Summarizes all suggestions for kinds of policies that should be applied and changes in the policy and institutional environment in order to achieve Sustainable Agriculture. <i>“Fundamental shifts in institutions, policies and incentives will be required in the search for, and broad adoption of, sustainable agricultural practices”</i> [11] <i>“Sustainable agriculture needs ... supportive external institutions”</i> [76]
Society	Summarizes all statements that express that Sustainable Agriculture requires broad support of society, in moral, financial and other ways. Also includes claims for a changed society (regarding its organization, thinking, underlying values and roles of individuals) as such a change is often the precondition for support for Sustainable Agriculture. <i>“[S]ustainable agriculture requires a commitment to changing public policies, economic institutions, and social values.”</i> [29] <i>“Even so the successful implementation of alternative models of sustainable agriculture requires the support of a new social contract. between farmers, food processors/retailers, consumers and the state.”</i> [54]

**Table S3.** Strength of the presence of each theme in the different clusters measured as indicator value (measures the statistical alliance of the themes to the different clusters). The shades of grey indicate the strength of the presence of a theme in each cluster (white: 0.00 to 0.09, light grey: 0.10 to 0.14, dark grey: 0.15 to 0.29, black: 0.30 and higher).

Group	Theme	Indicator value					
		cl. 1	cl. 2	cl. 3	cl. 4	cl. 5	cl. 6
Goals	Economic	0.21	0.17	0.03	0.11	0.21	0.11
	Environmental: Non-Production-Specific	0.14	0.10	0.12	0.06	0.23	0.09
	Environmental: Production-Specific	0.18	0.15	0.04	0.07	0.21	0.12
	Overarching	0.12	0.24	0.01	0.14	0.24	0.01
	Social	0.20	0.15	0.06	0.07	0.21	0.09

Table S3. Cont.

Group	Theme	Indicator value					
		cl. 1	cl. 2	cl. 3	cl. 4	cl. 5	cl. 6
Strategies	Adaptive Management	0.01	0.15	0.05	0.05	0.25	0.16
	Co-operation	0.00	0.02	0.01	0.08	0.15	0.13
	Ecology-based	0.00	0.12	0.07	0.03	0.33	0.05
	Economics-based	0.09	0.16	0.01	0.00	0.22	0.29
	Holistic & Complex Systems Thinking	0.02	0.04	0.00	0.43	0.04	0.04
	Knowledge & Science	0.00	0.02	0.01	0.08	0.12	0.43
	Subsidiarity	0.00	0.02	0.06	0.16	0.30	0.08
Fields of Action	Agri-Food System	0.01	0.20	0.06	0.00	0.19	0.22
	Management & Technological Solutions	0.01	0.12	0.13	0.19	0.21	0.21
	Social & Environmental Challenges	0.00	0.00	0.06	0.02	0.10	0.16
	Social & Human Capital	0.00	0.01	0.01	0.10	0.22	0.38
	Social, Political & Economic Environment	0.01	0.04	0.01	0.08	0.23	0.33

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