Smart Village and Climate-Smart Agriculture Researches, Publication Networks, Author Collaborations and Keyword interactions

230 results from Web of Science Core Collection for:

Smart village (Topic)

⊖ Copy query link

+ Add Keywords   Quick add keywords: ‹   + smart villages   + smart village   + climate-smart villages   + climate smart village   + digital village   + climate-smart tec ›

Refined By: Publication Years: 2025 or 2024 or 2023 or 2022 or 2021 ✕   Document Types: Article ✕   Open Access ✕   Publication Years: 2025 or 2024 or 2023 or 2022 or 2021 ✕

Document Types: Article ✕   Clear all

230 Documents   You may also like…

Analyze Results   Citation Report   Create Alert

Quick add keywords: ‹   + smart villages   + smart village   + climate-smart villages   + climate smart village   + digital village   ›

Quick add keywords: ‹   + digital village   + climate-smart technology   + climate-smart agricultural technologies   + climate-smart agri ›

Quick add keywords: ‹ nology   + climate-smart agricultural technologies   + climate-smart agriculture   + climate smart agriculture   ›

Distribution of scientific fields by publications

Web of Science Categories	Record Count	% of 230
Environmental Sciences	50	21.739
Environmental Studies	49	21.304
Green Sustainable Science Technology	30	13.043
Agronomy	17	7.391
Geography	14	6.087
Energy Fuels	13	5.652
Engineering Electrical Electronic	13	5.652
Agriculture Multidisciplinary	11	4.783
Food Science Technology	11	4.783
Economics	10	4.348
Multidisciplinary Sciences	10	4.348
Public Environmental Occupational Health	10	4.348
Computer Science Information Systems	9	3.913
Regional Urban Planning	8	3.478
Plant Sciences	7	3.043
Telecommunications	7	3.043
Urban Studies	7	3.043
Social Sciences Interdisciplinary	6	2.609
Geosciences Multidisciplinary	5	2.174
Construction Building Technology	4	1.739
Imaging Science Photographic Technology	4	1.739
Remote Sensing	4	1.739
Agricultural Economics Policy	3	1.304
Area Studies	3	1.304
Development Studies	3	1.304

Figure 2. Web of Science Categories on Smart village thematic (2021-2025)

```python
import matplotlib.pyplot as plt
import pandas as pd
# Duomenys
data = {
    "Field": [
        "Environmental Sciences", "Environmental Studies", "Green Sustainable Science Technology", "Agronomy",
        "Geography", "Energy Fuels", "Engineering Electrical Electronic", "Agriculture Multidisciplinary",
        "Food Science Technology", "Economics", "Multidisciplinary Sciences", "Public Environmental Occupational Health",
        "Computer Science Information Systems", "Regional Urban Planning", "Plant Sciences", "Telecommunications",
        "Urban Studies", "Social Sciences Interdisciplinary", "Geosciences Multidisciplinary",
        "Construction Building Technology", "Imaging Science Photographic Technology", "Remote Sensing",
        "Agricultural Economics Policy", "Area Studies", "Development Studies"
    ],
    "Count": [
        50, 49, 30, 17, 14, 13, 13, 11, 11, 10, 10, 10, 9, 8, 7, 7, 7, 6, 5, 4, 4, 4, 3, 3, 3
    ],
    "Percent": [
        21.739, 21.304, 13.043, 7.391, 6.087, 5.652, 5.652, 4.783, 4.783, 4.348, 4.348, 4.348,
        3.913, 3.478, 3.043, 3.043, 3.043, 2.609, 2.174, 1.739, 1.739, 1.739, 1.304, 1.304, 1.304
    ]
}
df = pd.DataFrame(data)
# Rikiuojame pagal Count
df_sorted = df.sort_values("Count", ascending=True)
# Braižome
plt.figure(figsize=(10, 8))
plt.barh(df_sorted["Field"], df_sorted["Percent"])
plt.xlabel("(%) of 230")
plt.title("Web of Science Categories")
plt.tight_layout()
plt.show()
```

Publication Years

Publication Years

Publication Years	Record Count	% of 230
2025	9	3.913
2024	55	23.913
2023	62	26.957
2022	64	27.826
2021	40	17.391

1 Figure. The percentage of published papers on Smart village thematic (2021-2025)

```
import matplotlib.pyplot as plt
import pandas as pd
# Nauji duomenys
data_years = {
    "Publication Year": [2021, 2022, 2023, 2024, 2025],
    "Record Count": [40, 64, 62, 55, 9],
    "Percent": [17.391, 27.826, 26.957, 23.913, 3.913]
}
df_years = pd.DataFrame(data_years)
# Braižome
plt.figure(figsize=(8, 6))
plt.bar(df_years["Publication Year"].astype(str), df_years["Percent"])
plt.ylabel("Percent (%)")
plt.xlabel("Year ")
plt.title()
plt.tight_layout()
plt.show()
```

☐ 2025	26	☐ 2016	46	☐ 2007	2		
☐ 2024	101	☐ 2015	24	☐ 2006	3		
☐ 2023	103	☐ 2014	14	☐ 2005	1		
☐ 2022	121	☐ 2013	13	☐ 2004	1		
☐ 2021	101	☐ 2012	8	☐ 2003	1		
☐ 2020	87	☐ 2011	7	☐ 2002	3		
☐ 2019	89	☐ 2010	6	☐ 2001	1		
☐ 2018	80	☐ 2009	3	☐ 1997	1		
☐ 2017	56	☐ 2008	1	☐ 1994	1		

3.1. Analysis of countries

Bibliographic coupling by Countries

ethiopia

Create Map   ✕

Choose number of countries

For each of the 23 countries, the total strength of the bibliographic coupling links with other countries will be calculated. The countries with the greatest total link strength will be selected.

Number of countries to be selected: 23 ⌃⌄

Table 1. The top 10 bibliographic coupling links with other countries on Smart village thematic (2021-2025)

Create Map   ✕

Verify selected countries

Selected	Country	Documents	Citations	Total link strength ⌄
☑	kenya	16	60	1651
☑	india	31	253	1514
☑	netherlands	9	43	1425
☑	usa	19	161	1400
☑	peoples r china	30	184	1312
☑	japan	7	100	1042
☑	germany	11	50	1031
☑	nigeria	6	22	918
☑	poland	15	212	721
☑	england	10	252	717
☑	italy	14	66	692
☑	south africa	8	29	660
☑	tanzania	5	26	651
☑	australia	8	81	645
☑	saudi arabia	9	224	634
☑	mali	5	51	613
☑	spain	11	56	602
☑	indonesia	16	85	457
☑	ethiopia	7	45	443
☑	pakistan	7	293	432

< Back   Next >   Finish   Cancel

Figure 3. Bibliographic coupling link by country on Smart village thematic (2021-2025). Network view

Cluster 1 (red) "People's Republic of China "; Cluster 2 (green) "The vision of Kenya"; Cluster 3 (blue) "India's vision"; Cluster 4 (yellow) "South Africa's vision"

Co-authorship by Countries

Figure 4. Bibliographic coupling link by country on Smart village thematics (2021-2025). Overlay view.

Node size represents the number of documents; link strength indicates bibliographic connections among countries. Colors correspond to the average publication year (2021–2025).

3.2. Analysis of organizations

Co-authorship by Organizations

Create Map

Choose type of analysis and counting method

Type of analysis:
- ● Co-authorship
- ○ Co-occurrence
- ○ Citation
- ○ Bibliographic coupling
- ○ Co-citation

Unit of analysis:
- ○ Authors
- ● Organizations
- ○ Countries

Counting method:
- ● Full counting
- ○ Fractional counting

VOSviewer thesaurus file (optional):

☐ Ignore documents co-authored by a large number of organizations

Maximum number of organizations per document: 25

[< Back] [Next >] [Finish] [Cancel]

japan   peoples r china

Create Map

Choose thresholds

Minimum number of documents of an organization: 3

Minimum number of citations of an organization: 0

Of the 490 organizations, 16 meet the thresholds.

[< Back] [Next >] [Finish] [Cancel]

japan   peoples r china

Table 2. The top 10 co-authorship links with other organizations on Smart village thematic (2021-2025)

Selected	Organization	Documents	Citations	Total link strength
☑	wageningen univ & res	4	19	4
☑	george inst global hlth	3	37	3
☑	int ctr trop agr ciat	4	26	3
☑	north west univ	5	16	3
☑	oyo state coll agr & technol	3	5	3
☑	univ new south wales	3	37	3
☑	guangxi vocat univ agr	3	38	2
☑	southeast univ	3	36	2
☑	univ nairobi	4	14	2
☑	vrije univ amsterdam	3	10	2
☑	int livestock res inst ilri	4	25	1
☑	int inst rural reconstruct	3	12	0
☑	int livestock res inst	3	11	0
☑	korea inst energy res	3	22	0
☑	polish acad sci	3	8	0
☑	univ padjadjaran	4	20	0

< Back   Next >   Finish   Cancel

japan   peoples r china

3.3. Analysis of authors

Co-authorship by authors

Create Map   ✕

Choose type of analysis and counting method

Type of analysis: ⑦
- ◉ Co-authorship
- ○ Co-occurrence
- ○ Citation
- ○ Bibliographic coupling
- ○ Co-citation

Unit of analysis:
- ◉ Authors
- ○ Organizations
- ○ Countries

Counting method: ⑦
- ◉ Full counting
- ○ Fractional counting

VOSviewer thesaurus file (optional): ⑦

[⌄] [...]

- ☐ Ignore documents with a large number of authors
  - Maximum number of authors per document: [25 ⇕]
- ☐ Reduce first names of authors to initials

Create Map   ✕

Choose thresholds

Minimum number of documents of an author: [2 ⇕]
Minimum number of citations of an author: [0 ⇕] ⑦

Of the 958 authors, 65 meet the thresholds.

Create Map   ✕

Choose number of authors

For each of the 65 authors, the total strength of the co-authorship links with other authors will be calculated. The authors with the greatest total link strength will be selected.

Number of authors to be selected: [65 ⇕]

Table 3. The top 5 co-autorship links with other authors on Smart village thematic (2021-2025)

Create Map   ✕

Verify selected authors

Selected	Author	Documents	Citations	Total link strength ⌄
☑	maulik, pallab k.	3	37	23
☑	peiris, david	3	37	23
☑	radeny, maren	5	18	21
☑	ambaw, gebermedihin	4	17	19
☑	solomon, dawit	4	17	19
☑	bhattacharya, amritendu	2	20	18
☑	daniel, mercian	2	20	18
☑	kant, shashi	2	20	18
☑	kaur, amanpreet	2	20	18
☑	mukherjee, ankita	2	20	18
☑	sagar, rajesh	2	20	18
☑	barbon, wilson john	4	17	16
☑	gonsalves, julian	5	20	16
☑	myae, chan	4	17	16
☑	thant, phyu sin	4	17	16
☑	devarapalli, siddhardha	2	34	15
☑	kallakuri, sudha	2	34	15
☑	patel, anushka	2	34	15
☑	recha, john walker	3	10	13
☑	tewari, abha	2	20	13

< Back   Next >   Finish   Cancel

Unconnected Items   ✕

? Some of the 65 items in your network are not connected to each other.
The largest set of connected items consists of 12 items.
Do you want to show this set of items instead of all items?

Yes   No   Cancel

Figure 6. Co-authorship by authors on Smart village thematic (2021-2025). Network view

Contractual designations: Cluster 1 (red) "Gebermedihin Ambaw"; Cluster 2 (green) "Sophia Huyer"; Cluster 3 (blue) "Maren Radeny"

3.4. Analysis of journals

Figure 7. Top 14 Cited Journals with the Strongest Citation Bursts on Smart village thematic (2021-2025)

3.5. Analysis of references

Figure 8. Analysis of cluster links on Smart village thematic (2021-2025)

Table 4. Summary of the 5 largest clusters by references on Smart village thematic (2021-2025)

Table 1. Summary of the largest 5 clusters.

ClusterID	Size	Silhouette	Label (LSI)	Label (LLR)	Label (MI)	Average Year
0	43	0.859	rural area	rural area (5.41, 0.05)	globalization challenge (4.66)	2019
4	18	0.988	influencing digital village	evidence (6.68, 0.01)	globalization challenge (0.09)	2021
6	8	0.955	agricultural development processes in the context of globalization challenges and new approaches to the concept of sustainable development	globalization challenge (7.74, 0.01)	rural area (0.04)	2018
7	8	1	self-sufficiency and energy savings of renewable thermal energy systems for an energy-sharing community	energy-sharing community (8.65, 0.005)	rural area (0.05)	2018
8	6	0.992	routerecoverer: a tool to create routes and recover noisy license plate number data	tool (8.65, 0.005)	rural area (0.05)	2020

Figure 9. Top 25 References with the Strongest Citation Bursts on Smart village thematics (2021-2025)

3.6. Analysis of keywords

Co-occurrence by author keywords

Create Map ☒

Choose type of analysis and counting method

Type of analysis: ⑦
- ○ Co-authorship
- ⦿ Co-occurrence
- ○ Citation
- ○ Bibliographic coupling
- ○ Co-citation

Unit of analysis:
- ○ All keywords
- ⦿ Author keywords
- ○ KeyWords Plus

Counting method: ⑦
- ⦿ Full counting
- ○ Fractional counting

VOSviewer thesaurus file (optional): ⑦

[   ] ⌄ [...]

[< Back] [Next >] [Finish] [Cancel]

Create Map ☒

Choose threshold

Minimum number of occurrences of a keyword: [5 ⌄]

Of the 992 keywords, 20 meet the threshold.

Create Map ☒

Choose number of keywords

For each of the 20 keywords, the total strength of the co-occurrence links with other keywords will be calculated. The keywords with the greatest total link strength will be selected.

Number of keywords to be selected: [20 ⌄]

Table 5. The top 20 co-occurrence by author keywords on Smart village thematic (2021-2025)

Selected	Keyword	Occurrences	Total link strength
✔	climate change	16	22
✔	climate-smart agriculture	18	19
✔	food security	11	13
✔	smart village	23	11
✔	adaptation	7	10
✔	innovation	6	9
✔	resilience	6	9
✔	smart villages	19	9
✔	agriculture	8	8
✔	climate-smart villages	5	8
✔	rural development	14	8
✔	rural areas	7	7
✔	adoption	7	6
✔	climate smart agriculture	6	5
✔	china	5	4
✔	internet of things	5	4
✔	covid-19	5	3
✔	india	5	3
✔	smart agriculture	5	2
✔	smart city	6	2

Figure 10. Co-occurrence by author keywords. Network view

Contractual notation: thematic center/(network node) - Cluster 1 (red) "Agriculture"; Cluster 2 (green) "Smart village"; Cluster 3 (blue) "Climate-smart agriculture "; Cluster 4 (yellow) "Adaptation"

Figure 11. Co-occurrence by author keywords on Smart village thematic (2021-2025). Overlay view

CiteSpace 6.3.R1 (64-bit) Basic - (c) 2003-2025 Chaomei Chen - Home: C:\Users\ASAS - CO-DESC

File Projects Data Visualization Overlay Maps Analytics Network Text Preferences Tutorials Help

Web of Science

Projects
New   SMART   More Actions ...
Project Home: C:\Users\ASAS\.citespace\Examples\Template\project
Data Directory: C:\Users\ASAS\.citespace\Examples\Template\data
Configuration: Source=WoS; LRF=2.5; L/N=10; LBY=5; e=1.0

GO!   Stop   Reset   JVM Memory   1024   (MB) Used   10   %

Time Slicing
From 2021 JAN To 2025 DEC #Years Per Slice 1

Text Processing
Term Source
☑ Title ☑ Abstract ☑ Author Keywords (DE) ☑ Keywords Plus (ID)
Term Type
○ Noun Phrases ○ Burst Terms   Detect Bursts   Entropy

Space Status
Similarity measure: Cosine
Link retaining factor: 2.5 times of #nodes

1-year slices   criteria space nodes links / all

Pruning configuration:
2021 g=53, k=25 1222 53 132 / 196
2022 g=80, k=25 2069 80 200 / 635
2023 g=86, k=25 2121 86 215 / 1497
2024 g=68, k=25 2292 68 170 / 387
2025 g=46, k=25 353 46 115 / 646

Node Types
○ Author ○ Institution ○ Country ● Keyword ○ Term ○ Source ○ Category
○ Reference ○ Cited Author ○ Cited Journal

Links
Strength Cosine   Scope Within Slices

Selection Criteria
g-index | Top N | Top N%

The selection uses a modified g-index in each slice: $g^2 \leq k \sum_{i \leq g} c_i, k \in Z^+$

To include more or fewer nodes, increase or decrease the scale factor k = 25

Process Reports
10   Article; Early Access
5   Article; Proceedings Paper

Distinct references [Valid]:   11417   97.2653%
Distinct references [Invalid]:   321   2.7347%

Parsing Time: 2 seconds
Total Run time: 2 seconds

Merged network: Nodes=236, Links=821
Exclusion List: 0
Network modeling ends at Thu Dec 25 14:52:14 EET 2025.

Pruning | Visualization
Pruning
☐ Pathfinder   ☐ Pruning sliced networks
☐ Minimum Spanning Tree   ☐ Pruning the merged network

Figure 12. Keyword cluster analysis on Smart village thematic (2021-2025)

Table 6. Summary of the 8 largest clusters on Smart village thematic (2021-2025)

Table 1. Summary of the largest 8 clusters.

ClusterID	Size	Silhouette	Label (LSI)	Label (LLR)	Label (MI)	Average Year
0	36	0.807	rural area	rural area (55.87, 1.0E-4)	rural digital business ecosystem (2.22)	2022
1	29	0.766	smart agricultural practice	smart agricultural practice (53.46, 1.0E-4)	adaptation practice (1.47)	2022
2	25	0.809	south africa	south africa (43.83, 1.0E-4)	smart mental health project (0.61)	2022
3	18	0.912	panel evidence	panel evidence (43.01, 1.0E-4)	gender agriculture policies (0.19)	2023
4	16	0.9	smart village	bifacial photovoltaic module (42.85, 1.0E-4)	rural tourism development (0.16)	2022
5	14	0.9	rural development	rural development (53.05, 1.0E-4)	mountainous village relocation planning (0.12)	2023
6	12	0.922	non-point pollution control	non-point pollution control (37.79, 1.0E-4)	multiple health risk (0.07)	2021
7	8	0.947	transcendental residual convolutional swin transformer	transcendental residual convolutional swin transformer (21.14, 1.0E-4)	smart village (0.01)	2024

Figure 13. Keyword timeline diagram on Smart village thematic (2021-2025)

Figure 14. Top 25 keywords with the strongest citation bursts on Smart village thematic (2021-2025)