

South East Afghanistan Water Resources Assessment
Matun Area Field Support
Henry Shovic
May 1, 2009

The objective of this set of maps is to help ground personnel focus on watershed and dam issues in four project locations in the Matun area, Shamal sub-basin, SE Afghanistan.

There are 62 POI's (Points of Interest) suggested to help the team on their field excursion. They relate to project feasibility, logistics, benefits, impacts, and watershed conditions in the area. All are close to major access roads, though low water crossings may affect access to the northern ones.

Most POI's are of a general nature. That is, the marked point represents an area, not a specific feature. Features are noted where it is important to find a location on the ground. Please take a photo at each point to document findings, as this will help the Stateside team verify the remotely-sensed data. The following table lists all the points, descriptions, and LATLONG locations. The attached maps show the entire Matun area. Detailed maps are also included to facilitate location on the ground.

List of POI's

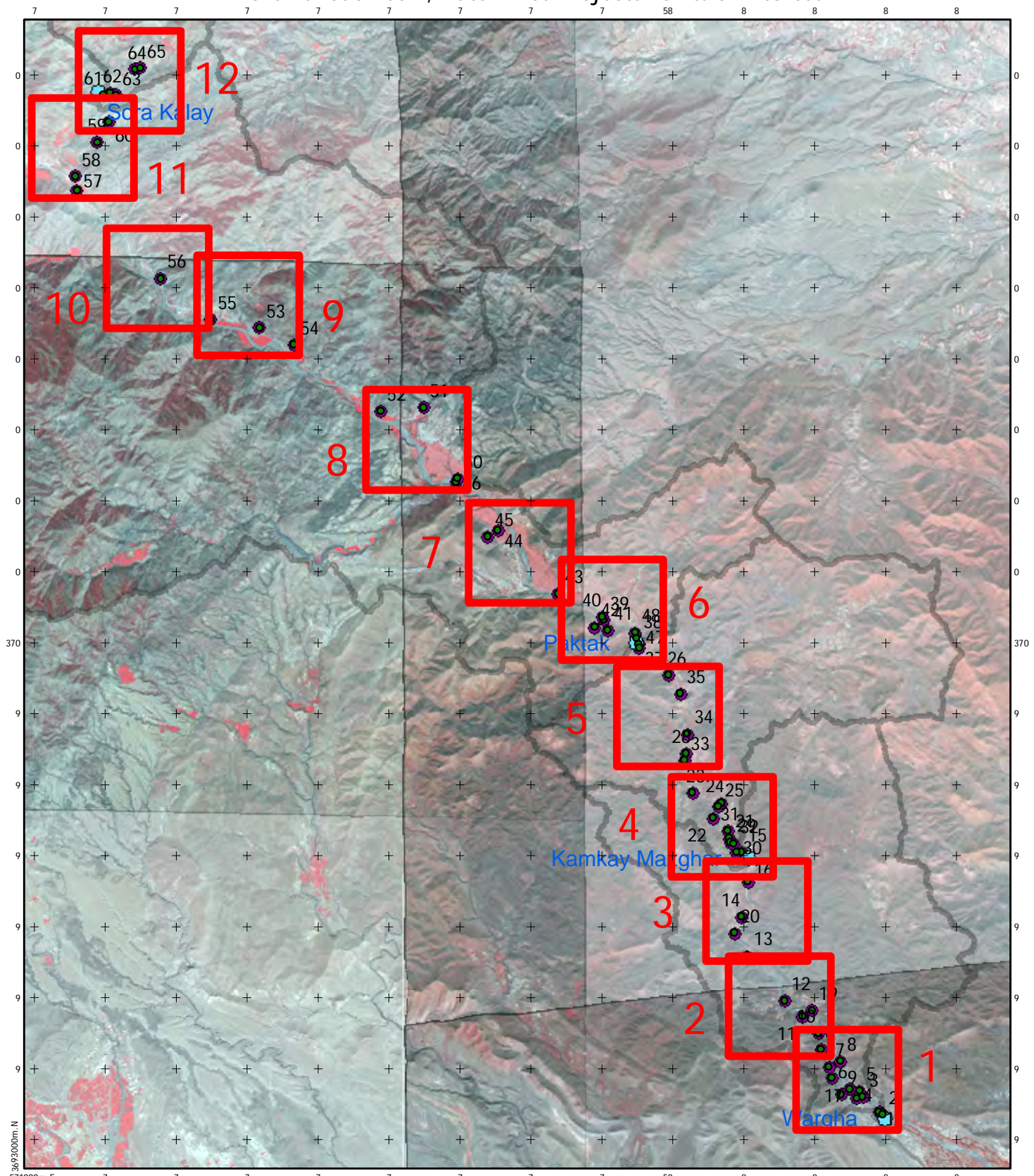
IDENTIFIER	DESCRIPTION	NOTES	POINT_X	POINT_Y
1	Upstream dam	Influences project design	69.89129394	33.37654399
2	Existing diversion ditch	Influences dam impacts	69.89182527	33.37627881
3	Active gully erosion	Contributes sediment	69.88887141	33.37852782
4	Active bank erosion	Impacts village; potential pool sedimentation; need composition	69.88796911	33.37829781
5	Active gully erosion	Possibly related to road drainage	69.88841883	33.37924463
6	Rangeland -steep	Possibly poor condition; weathered shale and sandstone	69.8841538	33.38095113
7	Active gully erosion	Possibly related to road drainage	69.8837475	33.38233708
8	Incised stream channel	Possibly related to geologic uplift	69.88553006	33.38305453
9	Quarry	Possible aggregate source; need composition	69.88560102	33.37883486
10	Volcanic bedrock outcrop	Possible aggregate source	69.88225293	33.38662911
11	Rangeland -steep	Possibly poor condition; gullies, rills; weathered volcanic rocks	69.87987626	33.38879498
12	Bedrock-controlled constriction	Possible dam site	69.87719652	33.39083433
13	Rangeland -steep	Probably poor condition; shallow soils, weathered volcanic rock	69.87155655	33.39657845
14	Rangeland -steep	Possibly fair condition; shrubland vegetation	69.87075361	33.40157248
15	Irrigated land above damsite	Possibly inundated by dam pool	69.87080226	33.40975323
16	Incised stream channel	Incised in volcanic rocks; possible geologic uplift	69.87172091	33.40597983
17	Braided stream channel	Large braided stream - common on all streams in Study Area	69.88686358	33.37952178
18	Rangeland -steep	Possibly fair condition - weathered shale, sandstone	69.88258288	33.38457492
19	Floodplain with surface water	Likely perennial stream, since flowing in October	69.8813338	33.38953777

20	Road washout with upstream reservoir	Water management problem	69.86959473	33.39952386
21	Stream bank	Fair condition; vegetated	69.86889659	33.41153149
22	Rangeland -steep	Fair condition; no active gullies; weathered volcanic rocks	69.86652418	33.4141666
23	Rangeland -steep	Fair condition - no active gullies; weathered volcanic rocks	69.86346048	33.41734773
24	Floodplain -vegetated	Stream flood plain in fair condition; not braided	69.86781125	33.41601595
25	Stream flood plain - vegetated	Fair condition not braided	69.86733198	33.41554328
26	Irrigated agriculture - extensive	Benefited by upstream dam	69.85996917	33.43234939
28	Rangeland -steep	Poor condition -overgrazed, no active gullies	69.86255423	33.42233674
29	Bridge or pipeline crossing	Compromised by pool?	69.86913753	33.41102254
30	Stream Channel - relatively stable	Non-braided, fair bank stability	69.87006586	33.40977055
31	Unknown but interesting	possibly fill dump, aggregate? hazardous waste?	69.86871221	33.41243585
32	Industrial site	Consider for dam impacts	69.86958009	33.41082223
33	Quarry	Volcanic rock	69.86225435	33.4215122
34	Rangeland -steep	Poor condition - shallow soil, weathered volcanic rock	69.86278967	33.42482759
35	Stream flood plain - braided	Coarse material - bouldery flood plain	69.86169921	33.42999937
37	Existing earthworks - dam	Appears nonfunctional; pool below dam	69.85540717	33.43625801
38	Floodplain with surface water	Likely perennial stream, since flowing in October	69.85518702	33.43700867
39	Stream bank - eroded	Poor condition?	69.85018028	33.43941537
40	Stream bank - vegetated	Fair condition	69.84997283	33.43977748
41	Rangeland -steep	Poor vegetative condition; shallow soils; no gullies	69.8507959	33.43806547

42	Rangeland -steep	Fair condition - deep soils no gullies	69.84883533	33.4385159
43	Irrigated agriculture - extensive	Not benefited by any dam	69.84329763	33.44279665
44	Irrigated agriculture - extensive	probably benefited by upstream dam	69.83426153	33.45090741
45	Rangeland -steep	Poor condition; sandy, rocky soils; weathered sandstone rocks	69.83276668	33.45009924
46	Braided stream channel -fine to sandy material	Large braided stream - common on all streams in Study Area	69.82793443	33.4570804
47	Irrigation Canal	functional? Usable? Enough capacity?	69.85553163	33.43583068
48	Irrigated Agriculture	Potential impact of dam; inundation	69.85493665	33.43777887
50	Major low water crossing	Major road access limitation	69.82817891	33.45754722
51	Major low water crossing	Major access limitation	69.82313853	33.46656602
52	Rangeland -steep	Poor condition; shallow sandy soils; weathered sandstone	69.81661679	33.46616523
53	Rangeland -steep	Poor condition; gully erosion; weathered shale soil	69.7983668	33.47685057
54	Rangeland -steep	Poor condition; rill and gully erosion; weathered shale soil	69.80350448	33.47469018
55	Stream bank - well vegetated	Good condition, but stream channel is braided; fine textured flood plain	69.79099722	33.47795216
56	Rangeland -steep	Poor condition; rill and gully erosion; weathered shale soils	69.78339273	33.48322285
57	Braided stream and low water crossing	Restricts access	69.7708152	33.4945259
58	Stable stream system	Vegetated banks and low terraces	69.77053721	33.49627959
59	Rangeland -moderate slopes	Poor vegetative condition; weathered shale; clayey soils	69.77395297	33.50057982
60	Rangeland -steep	Poor vegetative condition; medium soils from weathered sandstone and shale	69.77566525	33.50318849
61	Braided stream - coarse textured material	High energy stream system	69.77485764	33.50663489

62	Rangeland -moderate slopes	Poor condition; gully and rill erosion; weathered shale soil	69.77590581	33.50683382
63	Burned forested area	Recent burn (last 10 years); tree stumps?	69.77678209	33.50656041
64	Terraced agriculture	Looks abandoned	69.77978886	33.50980072
65	Rangeland -moderate slopes	Good condition; clayey soils from weathered shale	69.78055634	33.50997276

Southeast Afghanistan Water Resources Assessment: Shamal Sub-Basin, Matun Area Projects Points of Interest



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This map's objective is to show four water resource improvement projects, parts of their associated watersheds, and a list of field sites illustrating various aspects of watershed and dam location procedures. See additional maps for closeups, framed in red.

Southeast Afghanistan Water Resources Assessment: Shamal Sub-Basin, Matun Area Projects Points of Interest Detail 2



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South-East Afghanistan Water Resources Assessment



Southeast Afghanistan Water Resources Assessment: Shamal Sub-Basin, Matun Area Projects Points of Interest Detail 3



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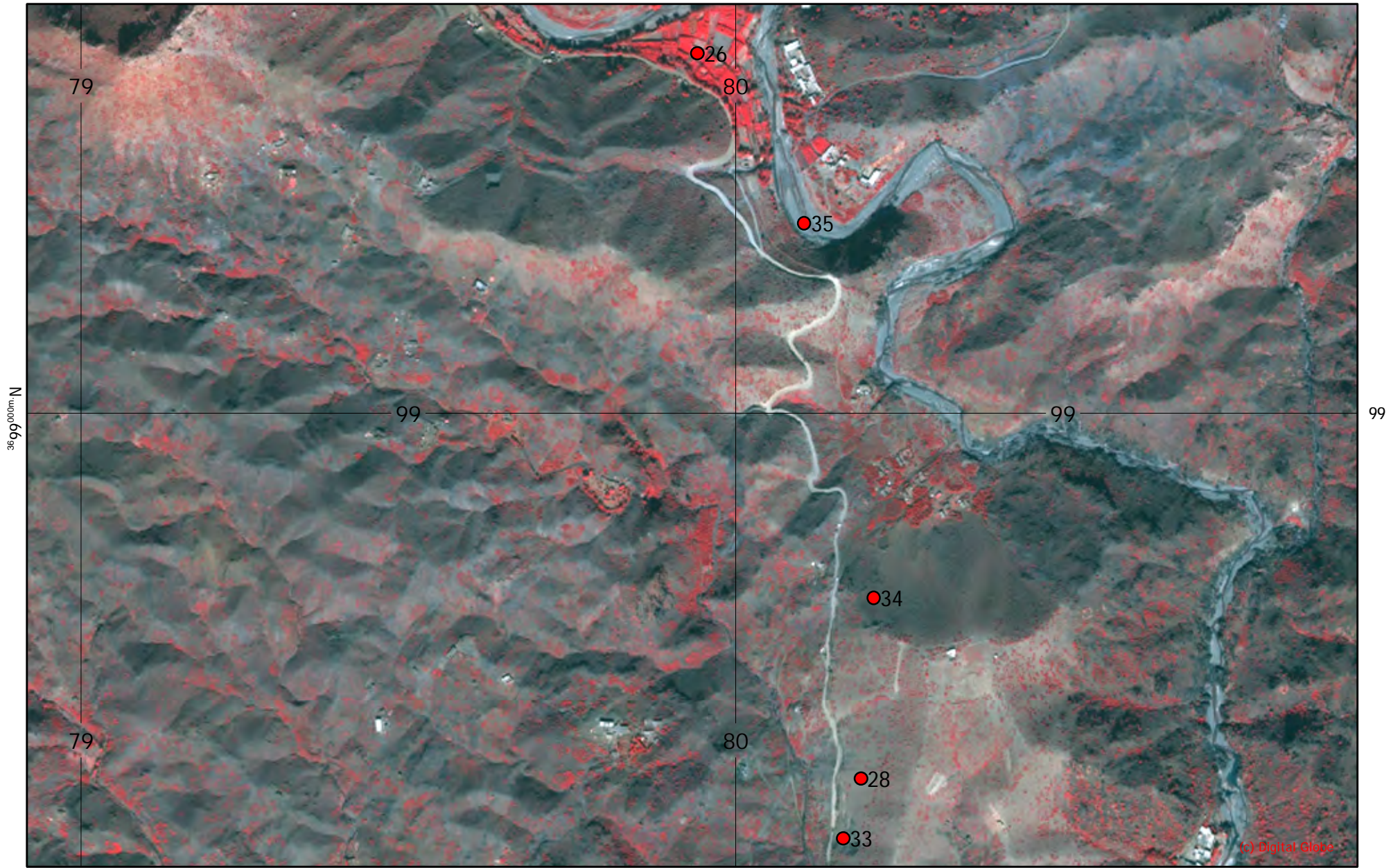
South-East Afghanistan Water Resources Assessment



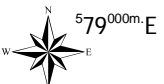
Southeast Afghanistan Water Resources Assessment: Shamal Sub-Basin, Matun Area Projects Points of Interest Detail 5

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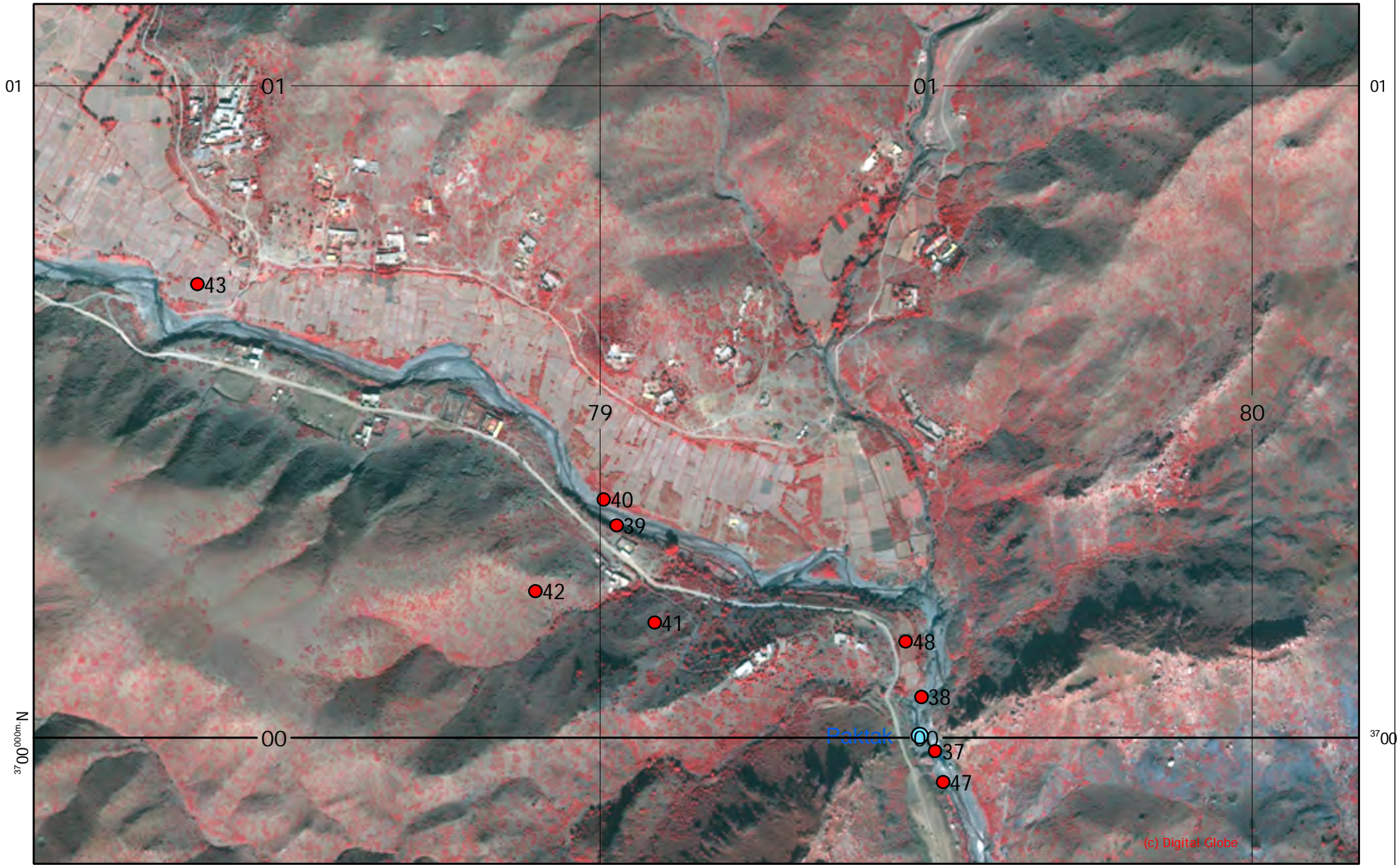
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Southeast Afghanistan Water Resources Assessment: Shamal Sub-Basin, Matun Area Projects Points of Interest Detail 6

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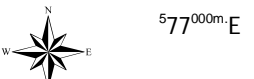


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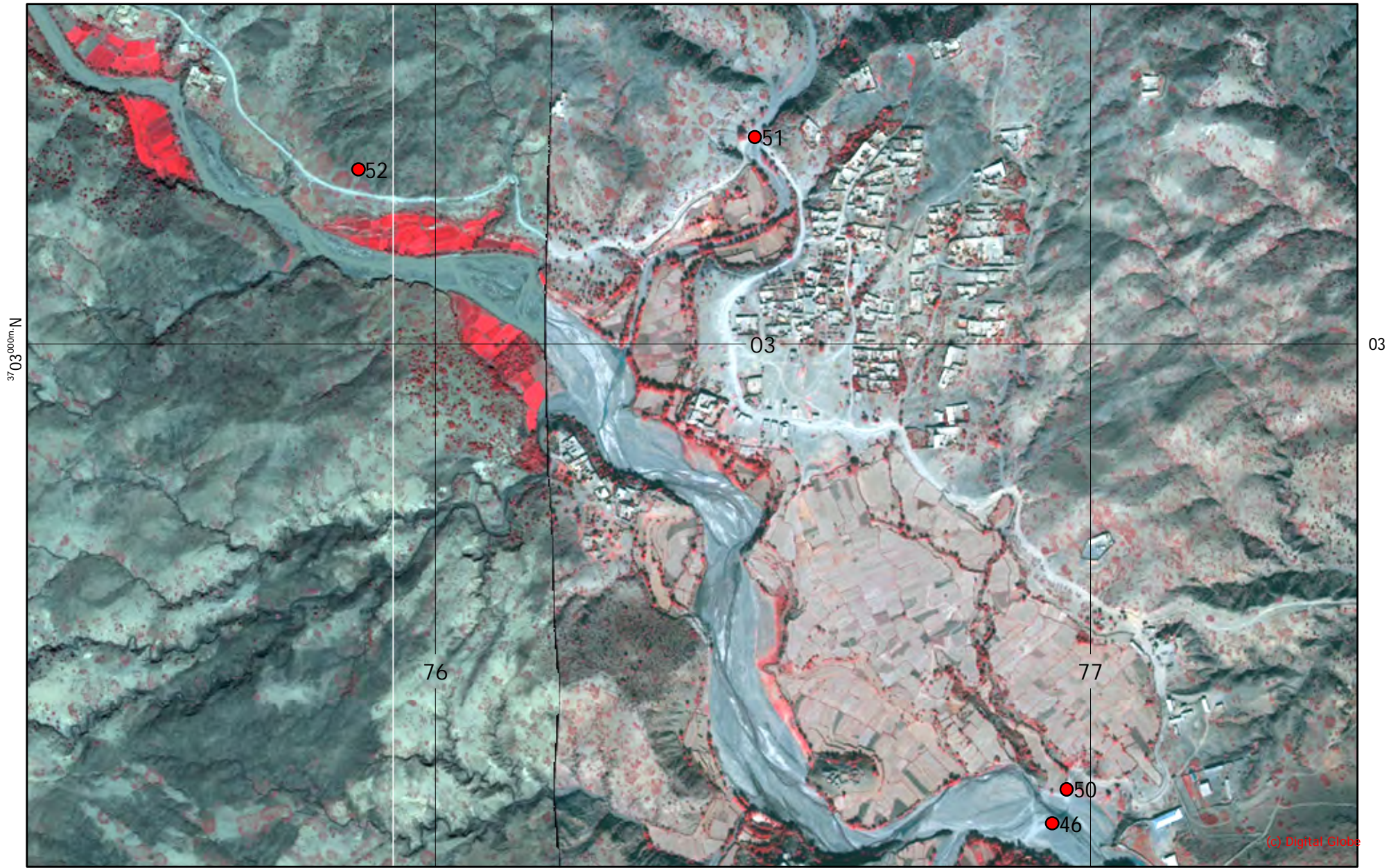
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USDA
U.S. Department
Of Agriculture
Foreign Agricultural
Service



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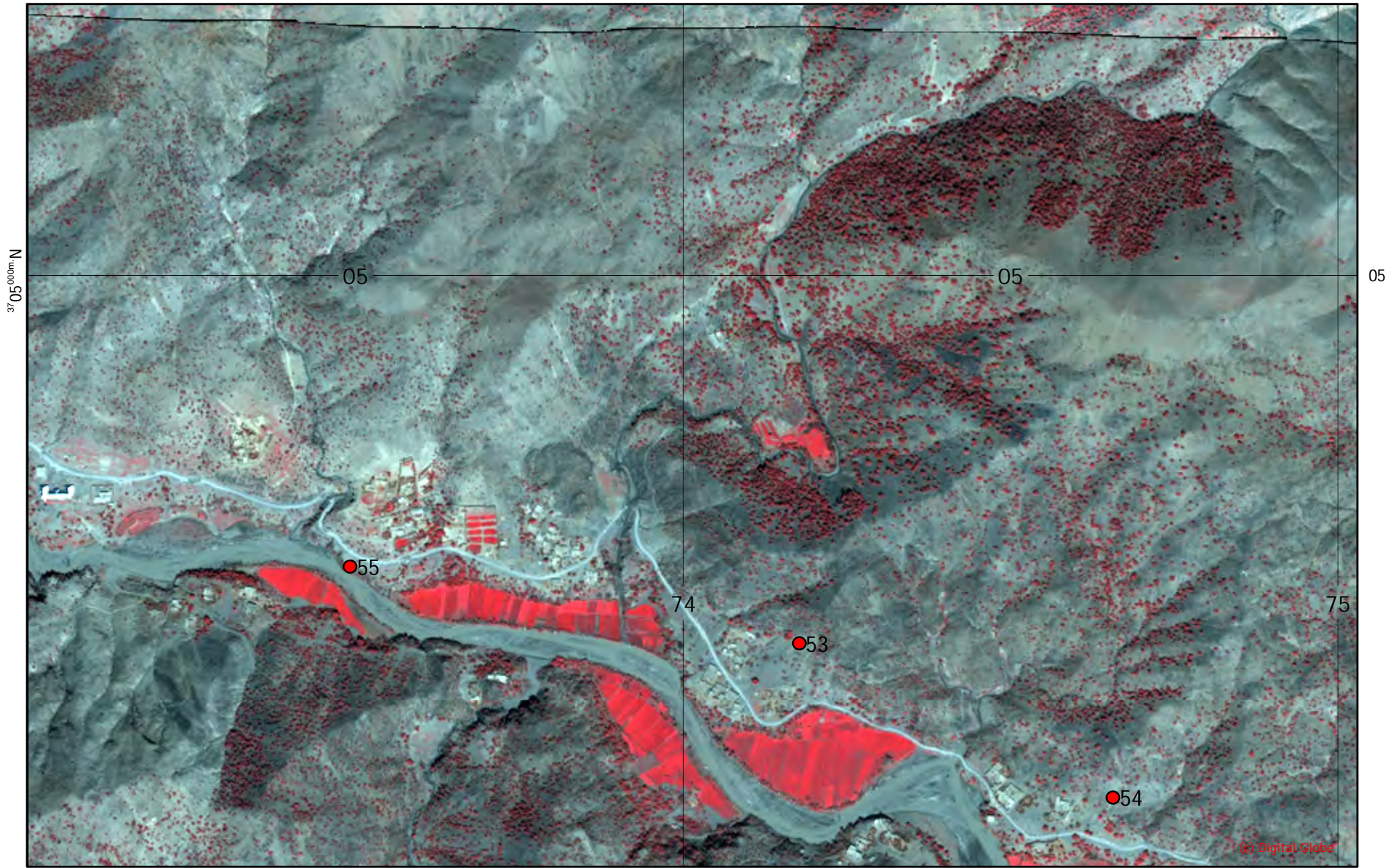
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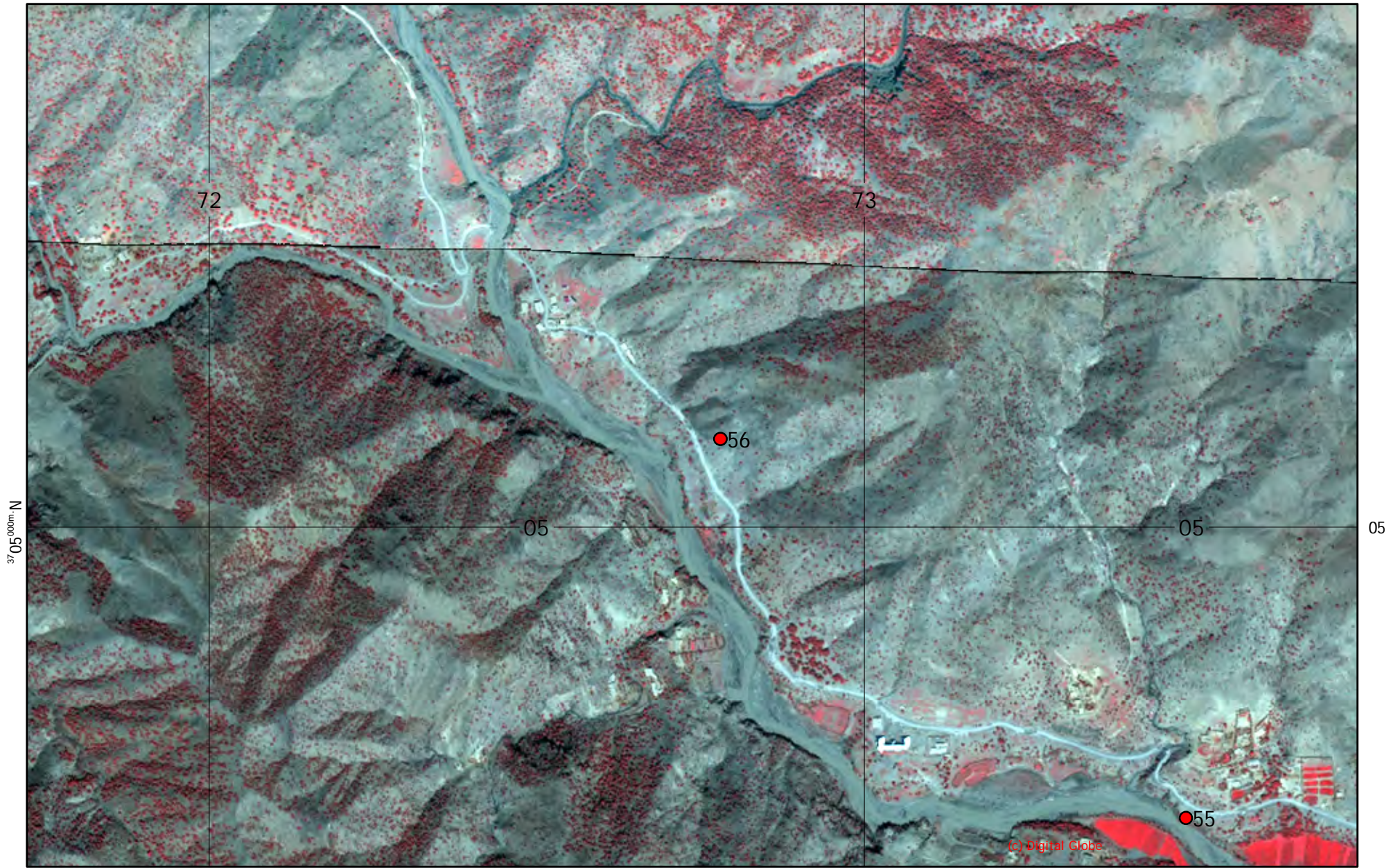


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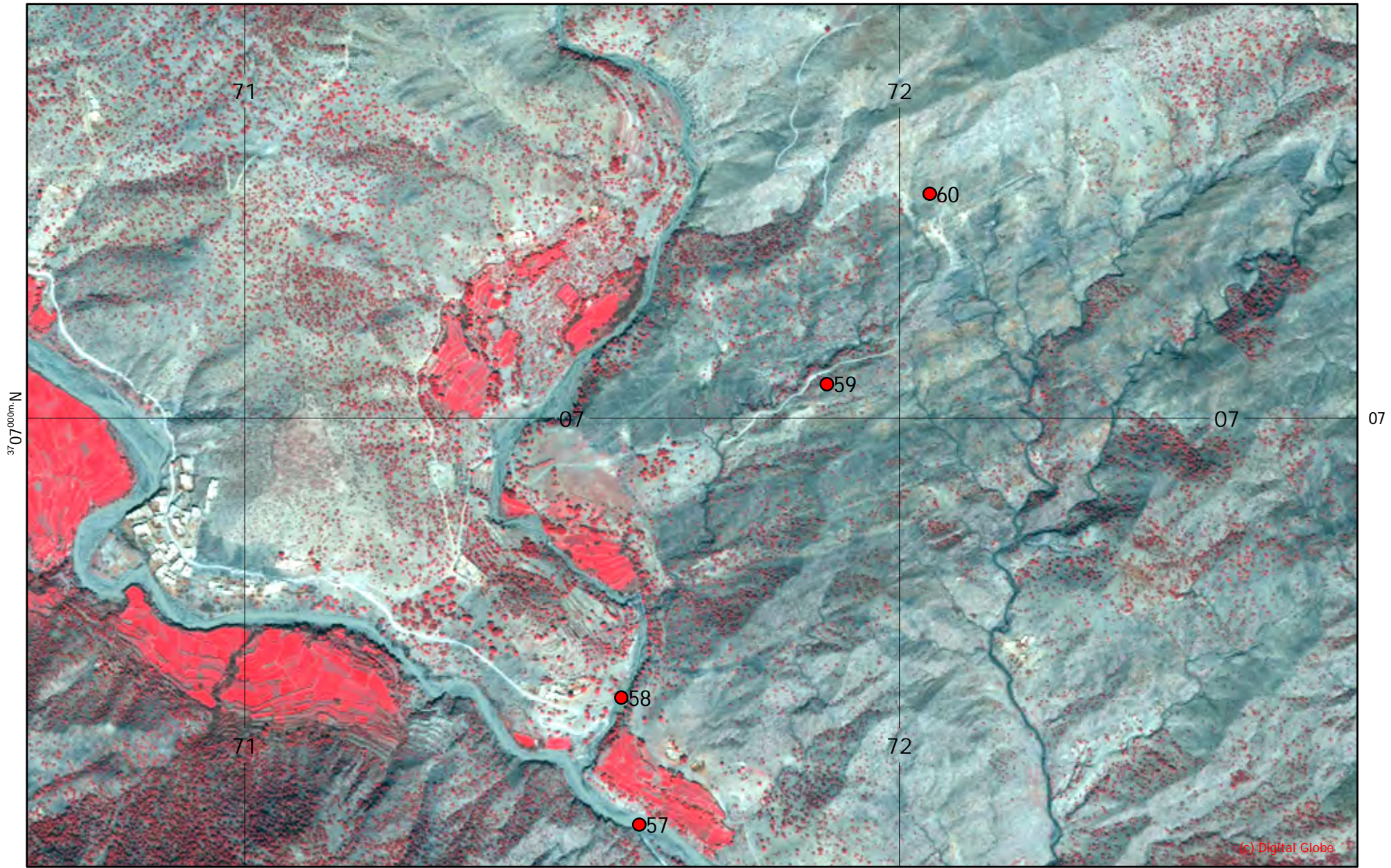


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MONTANA STATE UNIVERSITY
US Army Corps of Engineers
USDA
U.S. Department of Agriculture Foreign Agricultural Service

Southeast Afghanistan Water Resources Assessment: Sh1mal Sub-Basin, Matun Area Projects Points of Interest Detail 11



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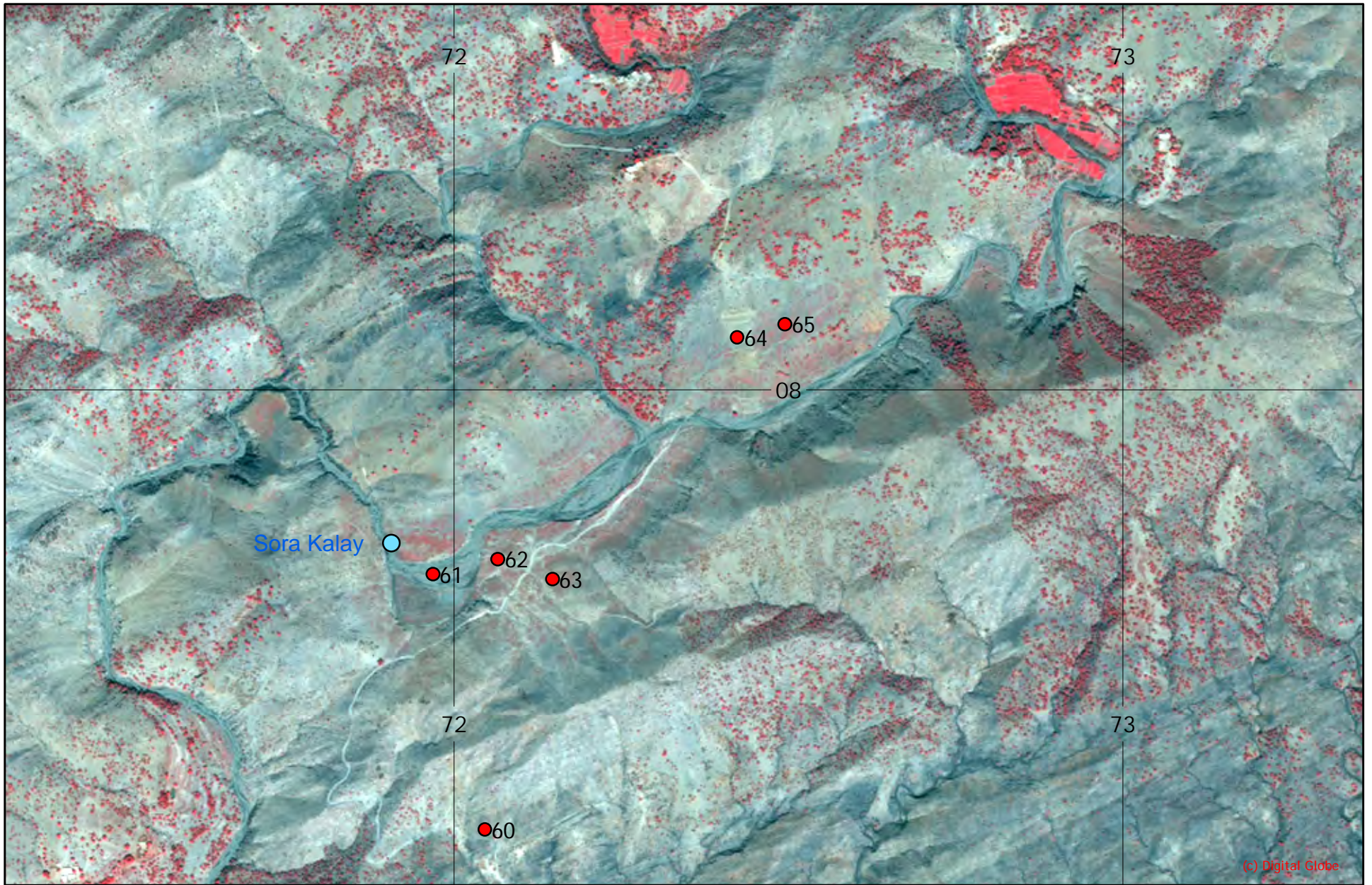
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