# Performance Comparison of LLMs in Fact and Relationship Extraction

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| **Metric** | **Paper** | **Manual** | **DeepSeek** | **ChatGPT** | **Mistral 24B** |
| Total facts identified | P1  P2  P3 | 32  46  66 | 30  40  40 | 34  50  15 | 76  54  45 |
| Total unique nodes | P1  P2  P3 | 90  188  268 | 40  50  45 | 89  97  56 | 42  45  35 |
| Total relationships extracted | P1  P2  P3 | 30  67  74 | 30  40  40 | 32  40  15 | 76  54  45 |
| Matching facts with manual | P1  P2  P3 |  | 11 (34.38%)  15 (32.61%)  65 (87.84%) | 14 (43.75%)  21 (45.65%)  11 (16.67%) | 9 (28.13%)  6 (13.04%)  69 (93.24%) |
| Missed facts compared to manual | P1  P2  P3 |  | 21 (65.63%)  31 (67.39%)  9 (12.16%) | 18 (56.25%)  25 (54.35%)  55 (83.33%) | 23 (71.88%)  40 (86.96%)  5 (6.76%) |
| Hallucinated /incorrect | P1  P2  P3 |  | 0 (0%)  0 (0%)  1 (1.35%) | 1 (3.13%)  2 (4.35%)  2 (3.03%) | 0 (0%)  0 (0%)  0 (0%) |

Paper 1: Diversity of fishing gears and crafts used for harvesting the Asian seabass, Lates calcarifer along the Bay of Bengal, Bangladesh coast

Paper 2: Fishing Gears and Practices in the Bukbhora Oxbow Lake: Implications for Biodiversity Conservation in South-west Bangladesh

Paper 3: When hazards become disasters: Coastal fishing communities in Bangladesh