

APPENDIX A

DAILY RAINFALL

This appendix presents the cumulative probability distributions of daily rainfall for the remaining four (4) probability distributions considered in the analysis. The Gumbel distribution is the primary focus of the analysis presented in Chapter 4 Table 4.3 for daily rainfall. However, these additional results are provided for exploration and comparative purposes.

A.1 Cumulative Probability Distribution

The figure below displays the cumulative probability distribution of daily rainfall for the five (4) probability distributions fitted in the study.

A.1.1 Generalized Pareto Distribution

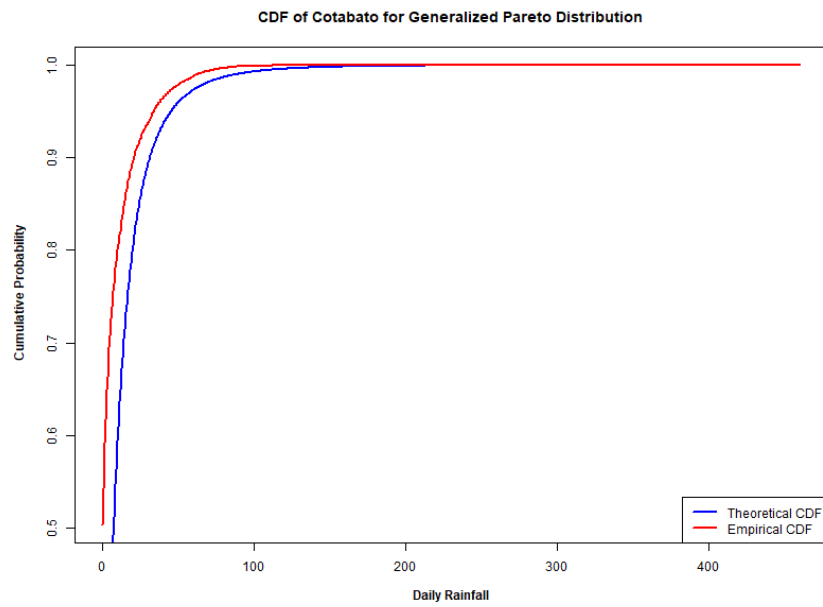
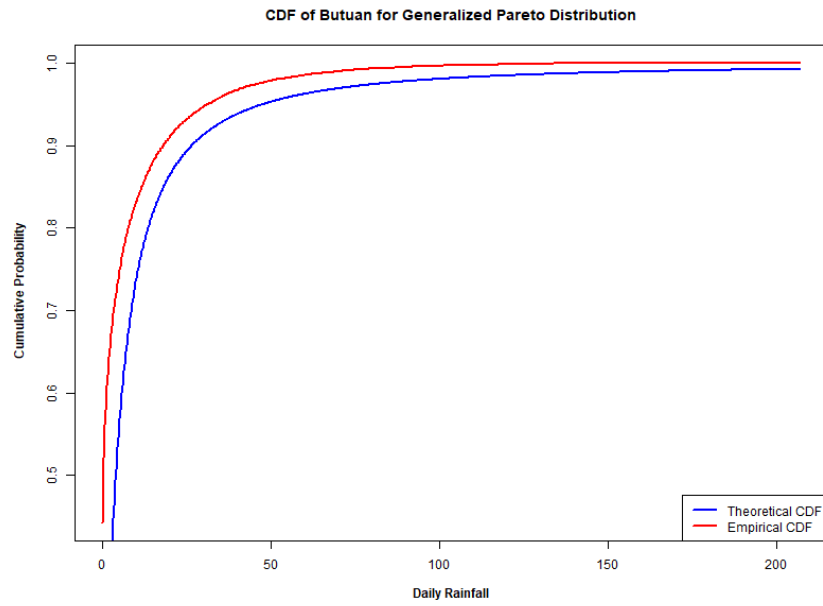
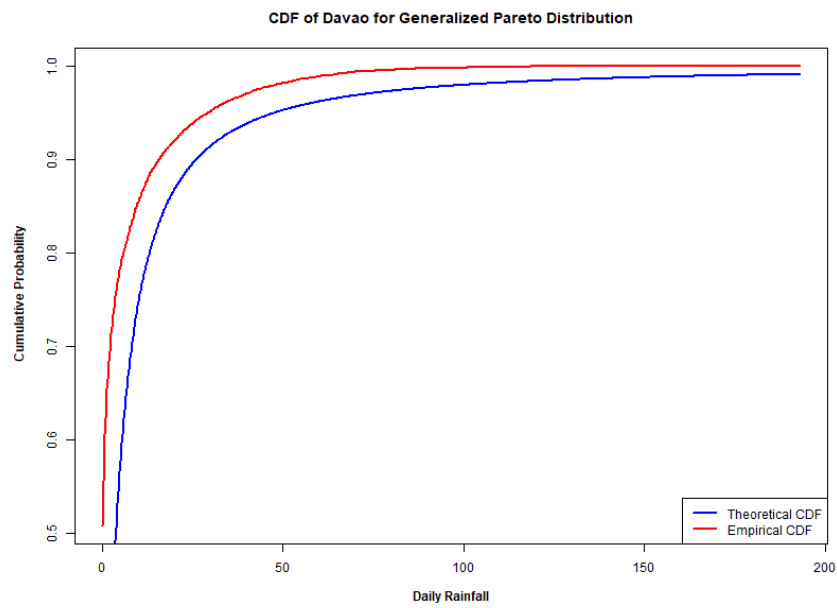
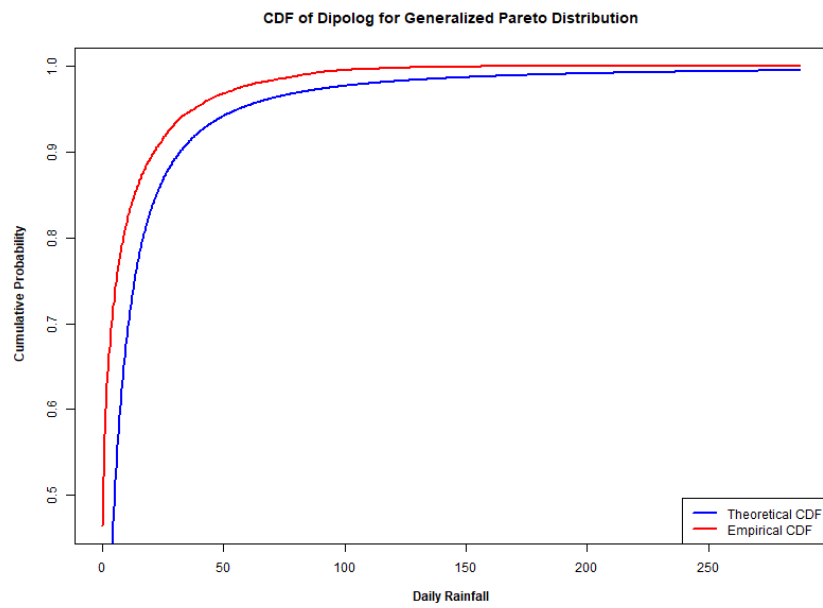


Figure A.1: CDF of Daily Rainfall for Butuan, and Cotabato

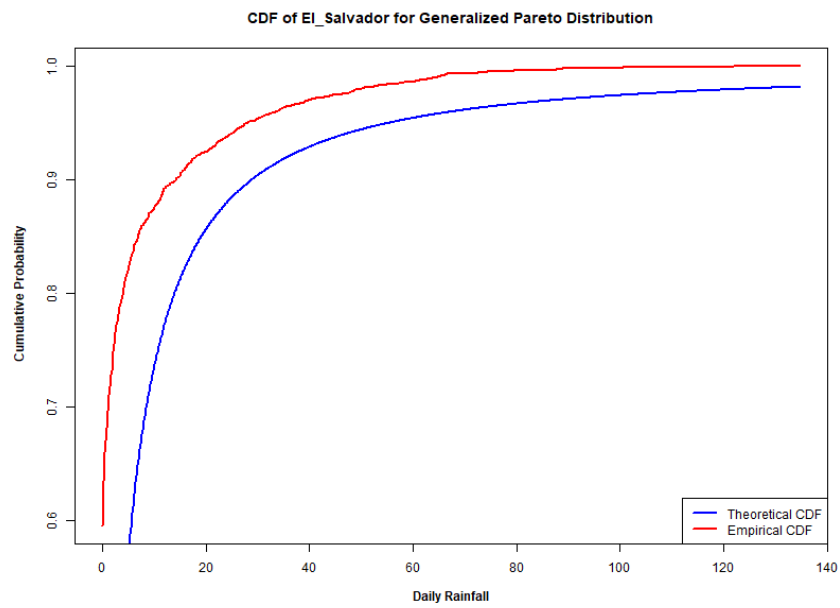


(a) Davao

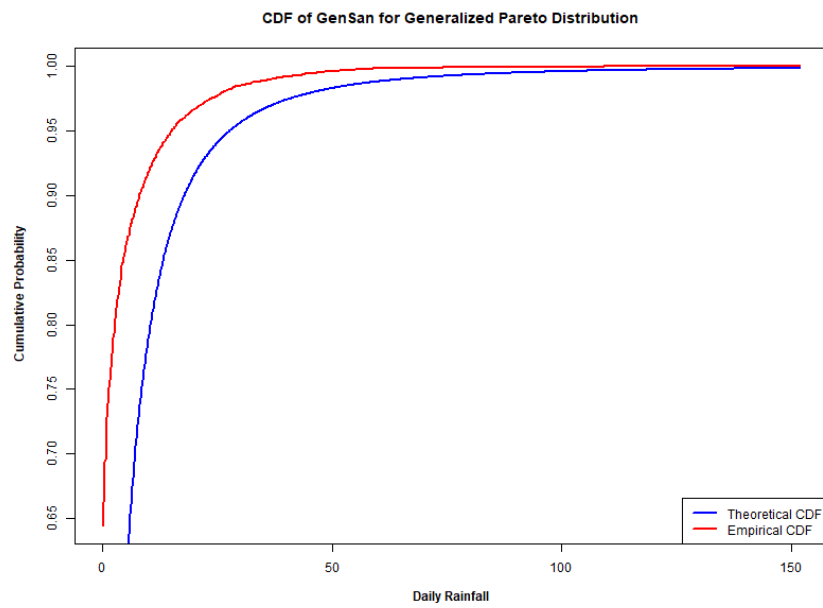


(b) Dipolog

Figure A.2: CDF of Daily Rainfall for Davao, and Dipolog

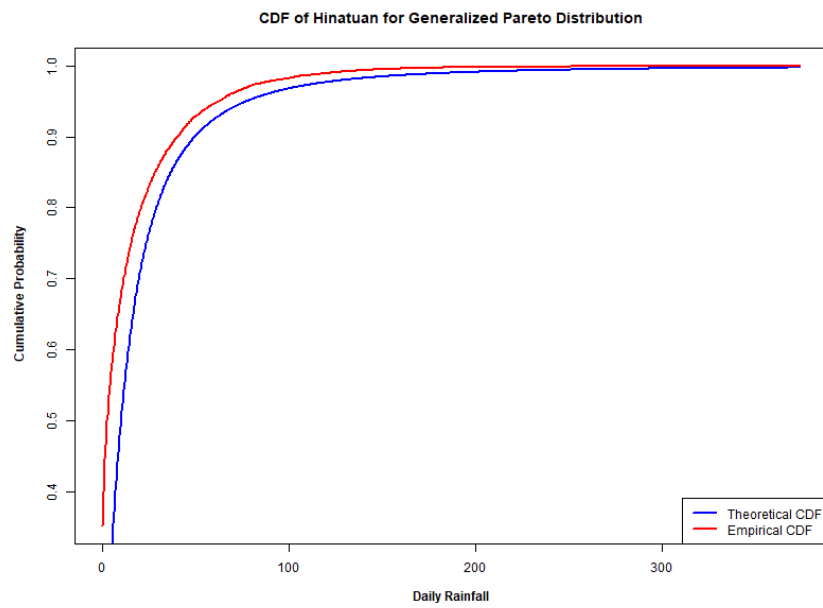


(a) El Salvador

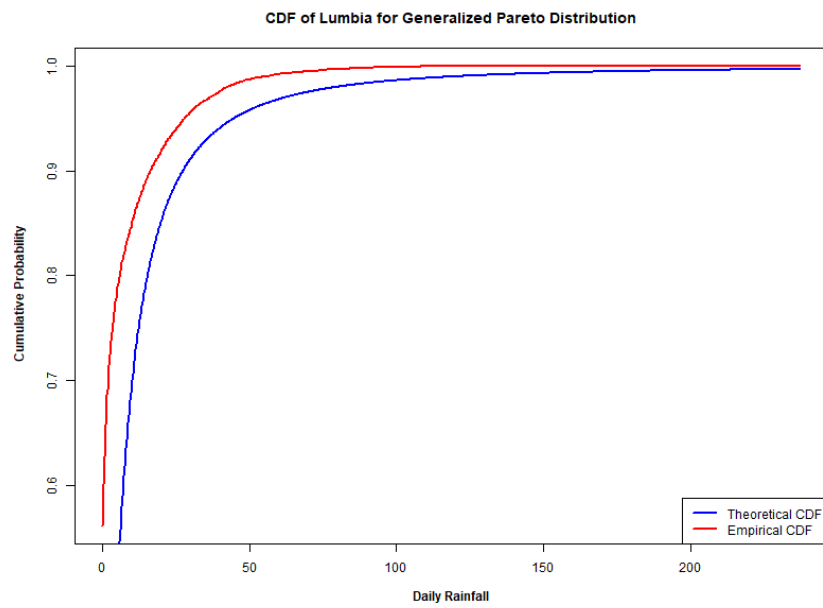


(b) General Santos

Figure A.3: CDF of Daily Rainfall for El Salvador, and General Santos

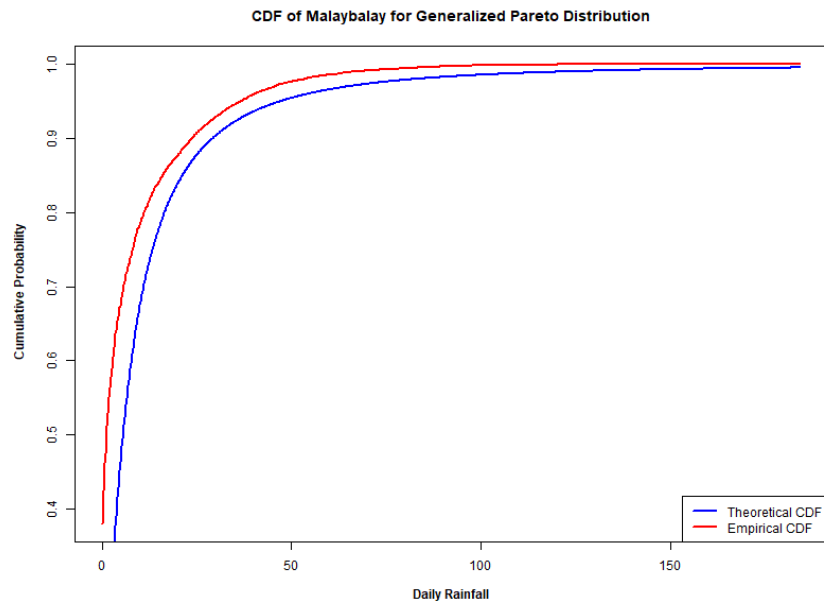


(a) Hinatuan

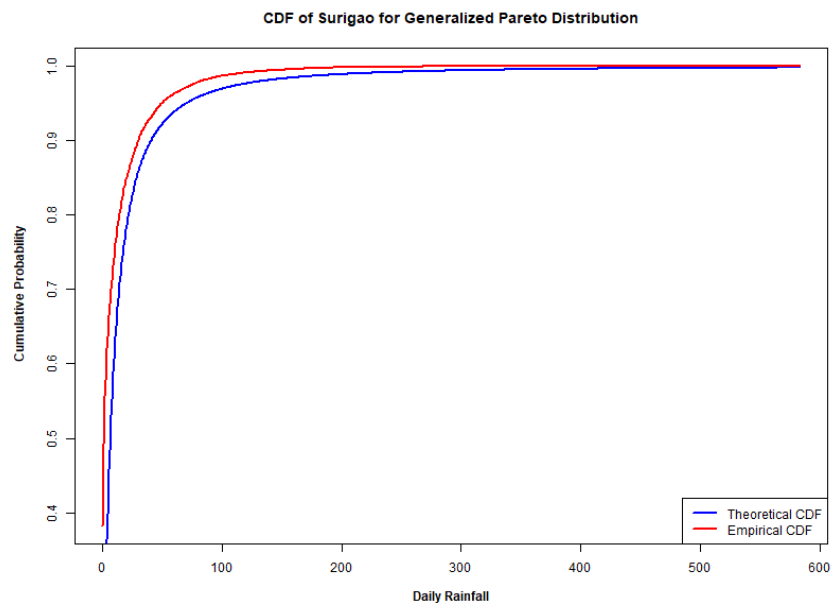


(b) Lumbia

Figure A.4: CDF of Daily Rainfall for Hinatuan, and Lumbia

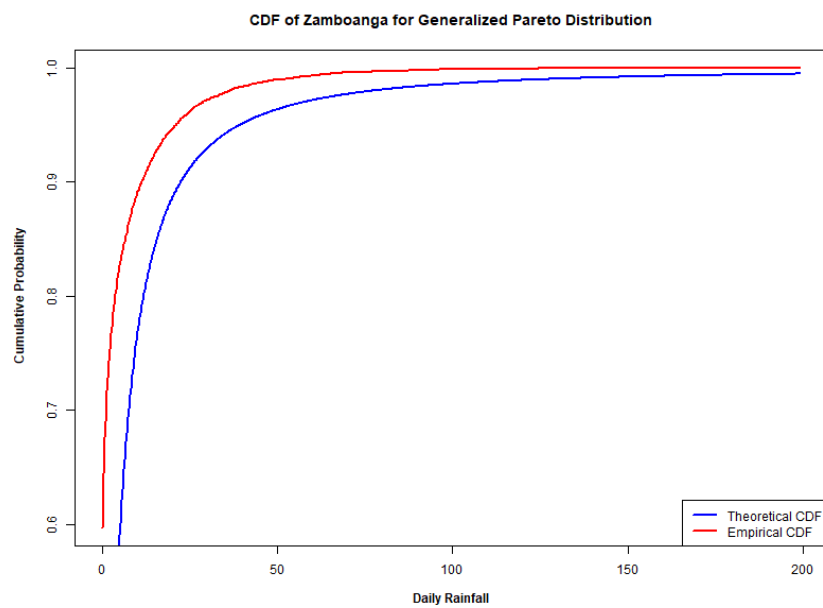


(a) Malaybalay



(b) Surigao

Figure A.5: CDF of Daily Rainfall for Malaybalay, and Surigao



(a) Zamboanga

Figure A.6: CDF of Daily Rainfall for Zamboanga

A.1.2 Generalized Extreme-Value Distribution

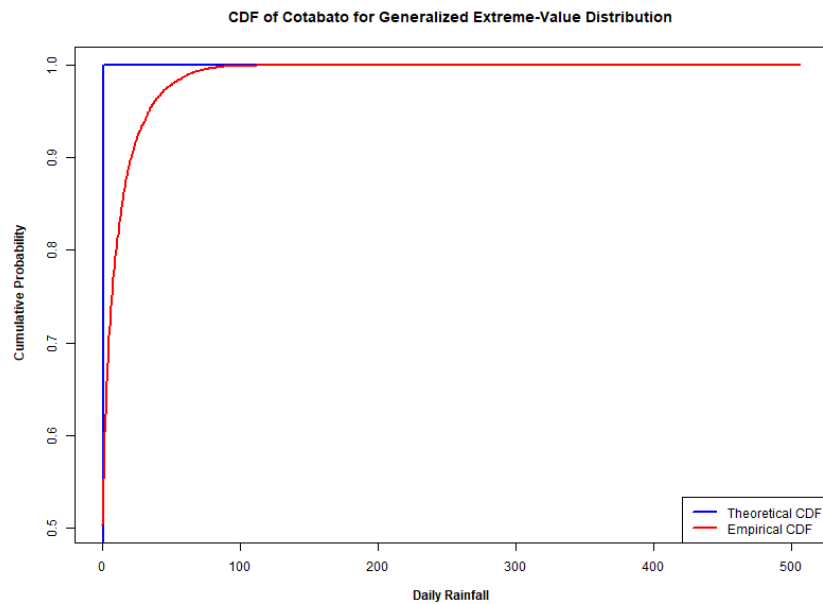
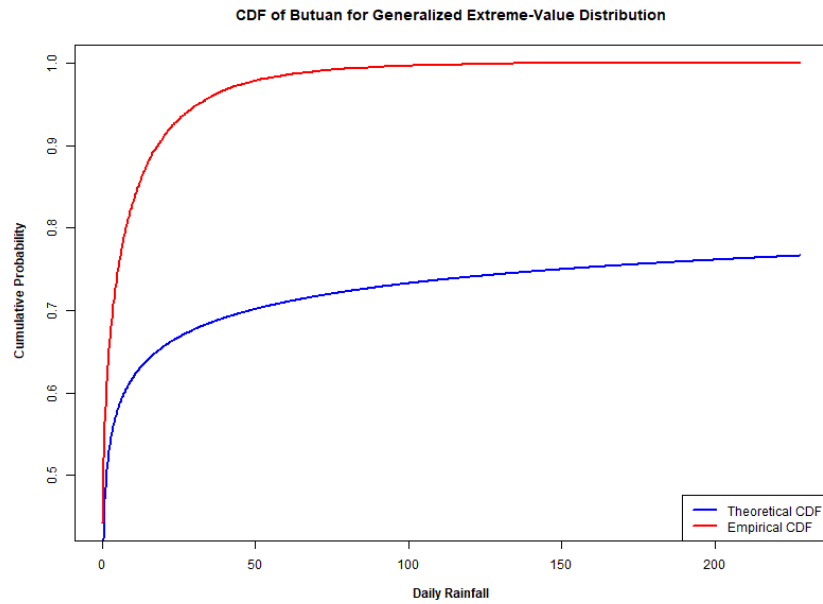
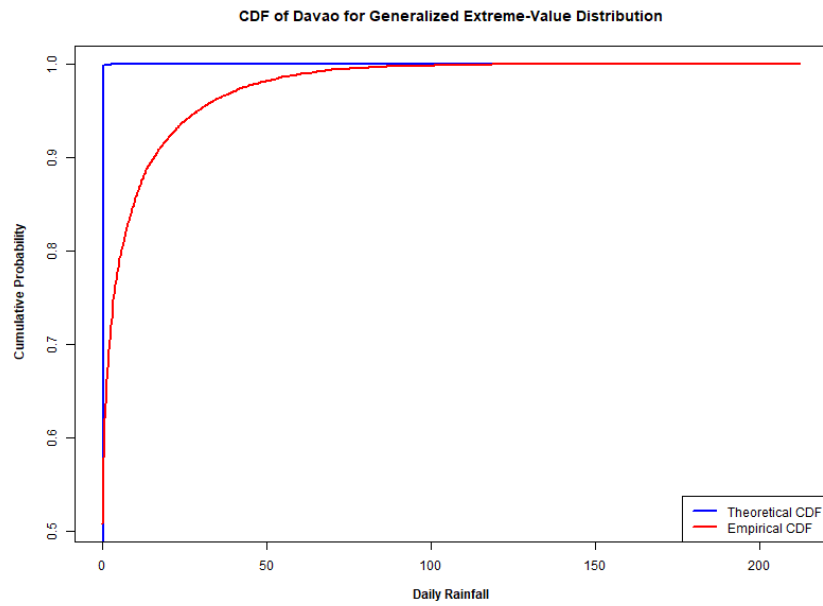
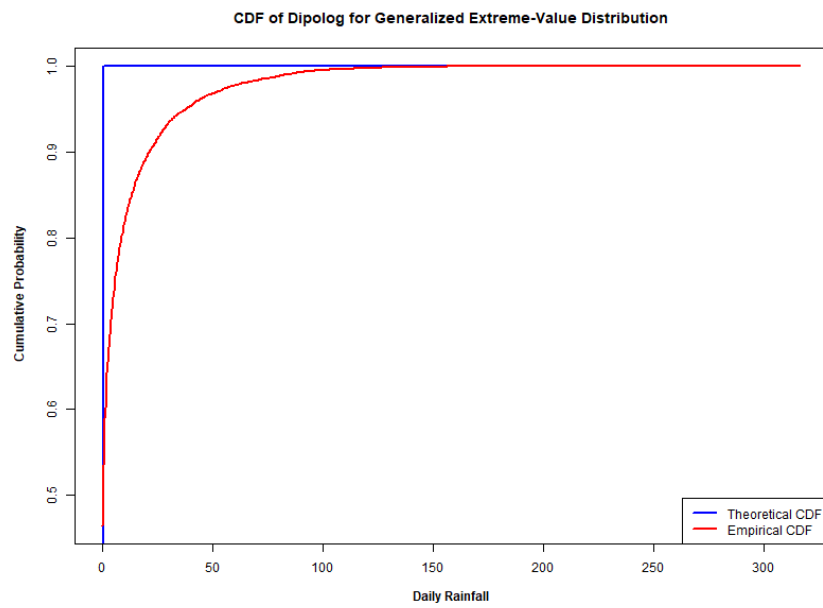


Figure A.7: CDF of Daily Rainfall for Butuan, and Cotabato

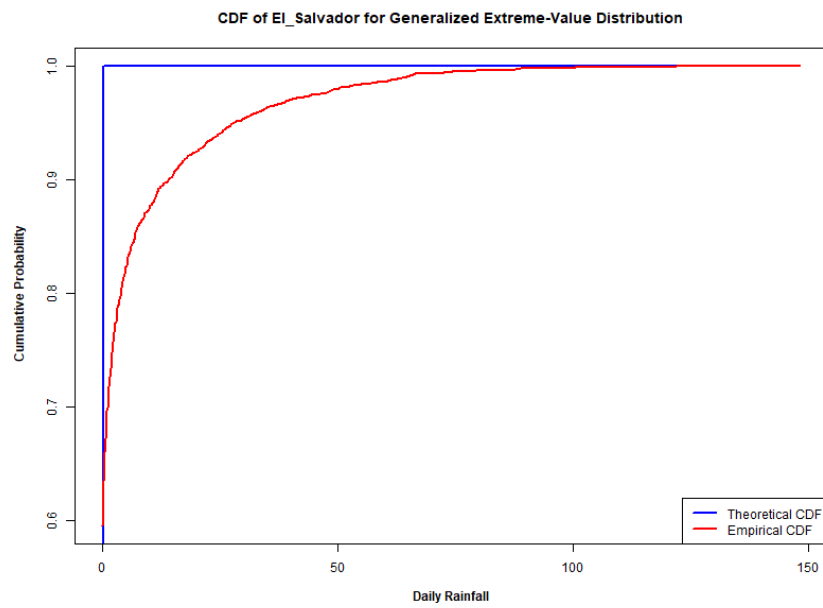


(a) Davao

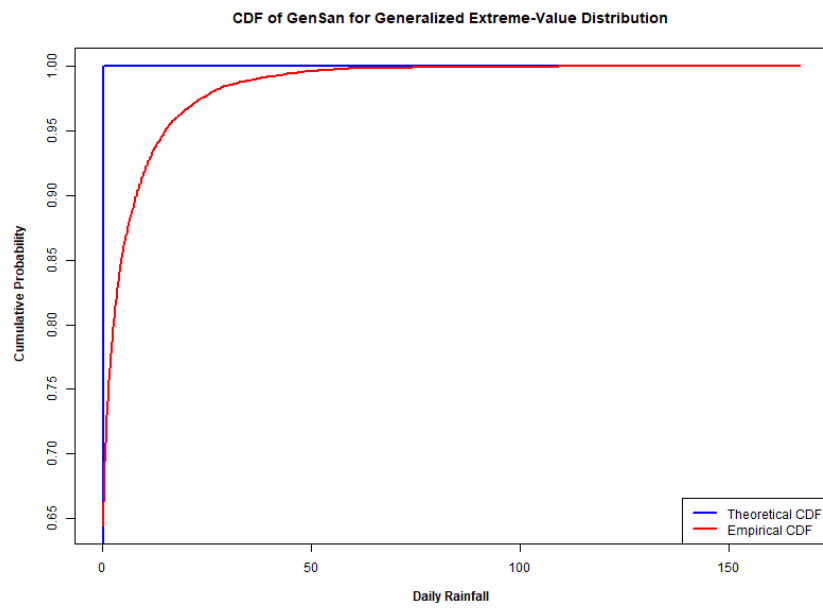


(b) Dipolog

Figure A.8: CDF of Daily Rainfall for Davao, and Dipolog

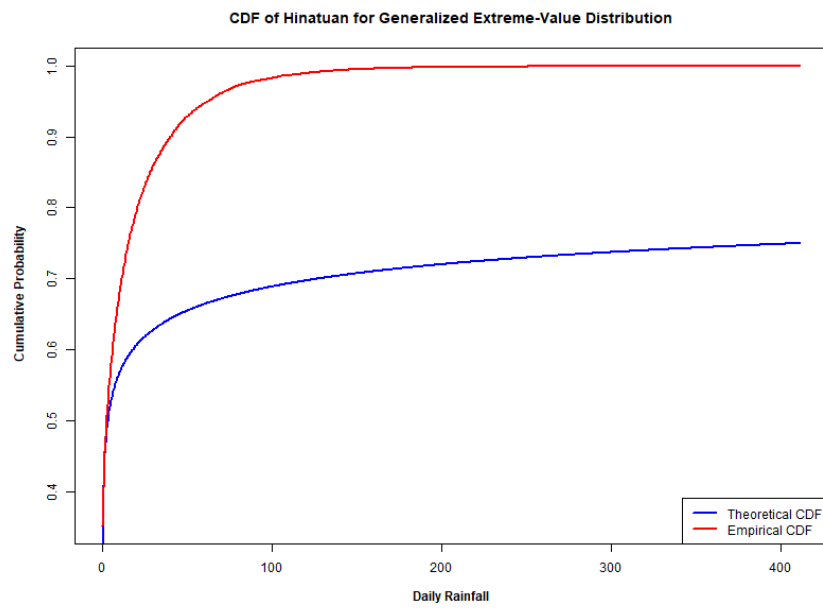


(a) El Salvador

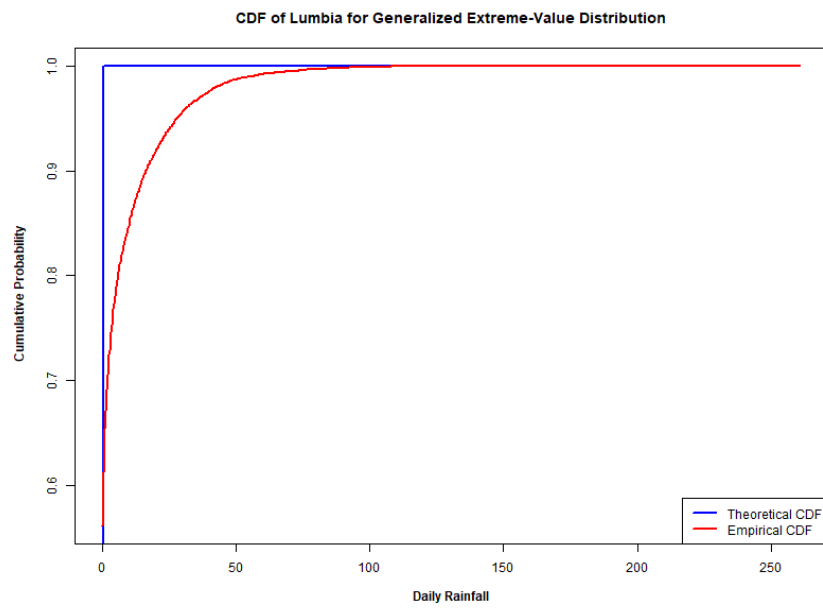


(b) General Santos

Figure A.9: CDF of Daily Rainfall for El Salvador, and General Santos

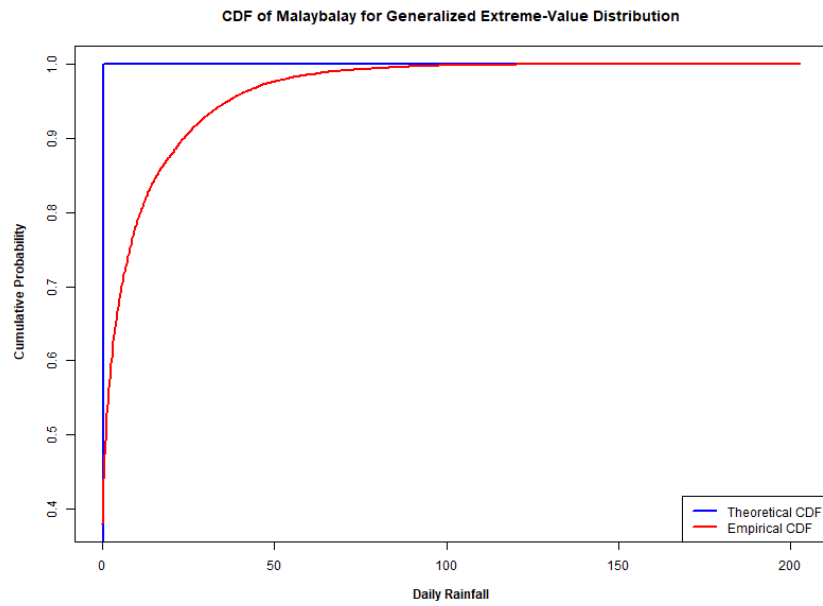


(a) Hinatuan

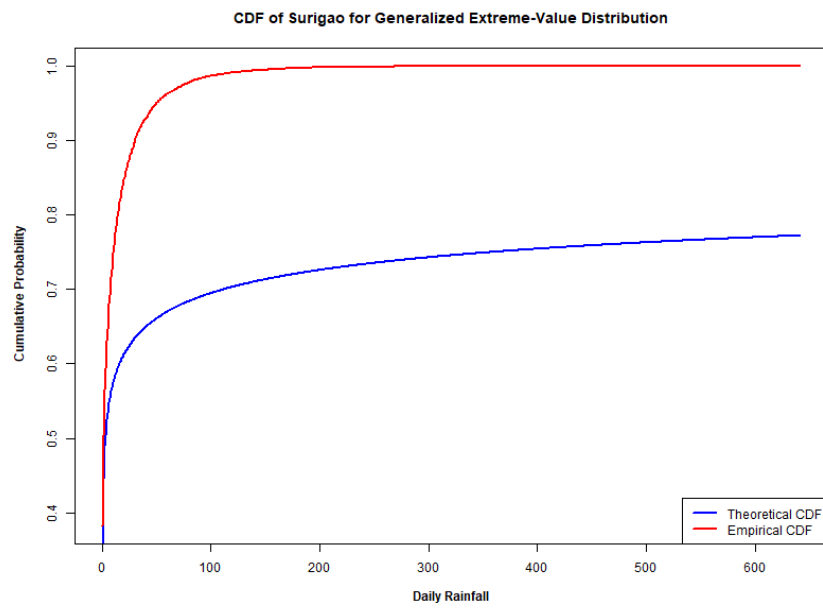


(b) Lumbia

Figure A.10: CDF of Daily Rainfall for Hinatuan, and Lumbia

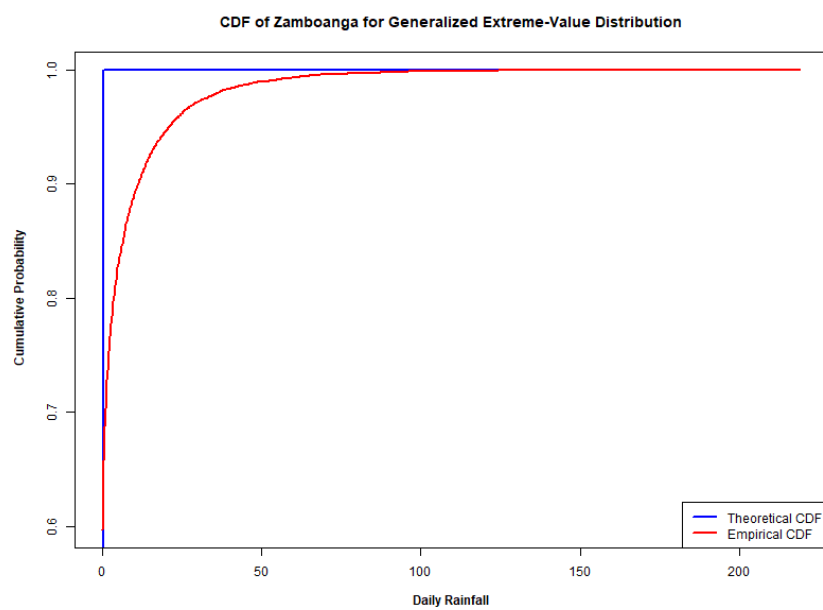


(a) Malaybalay



(b) Surigao

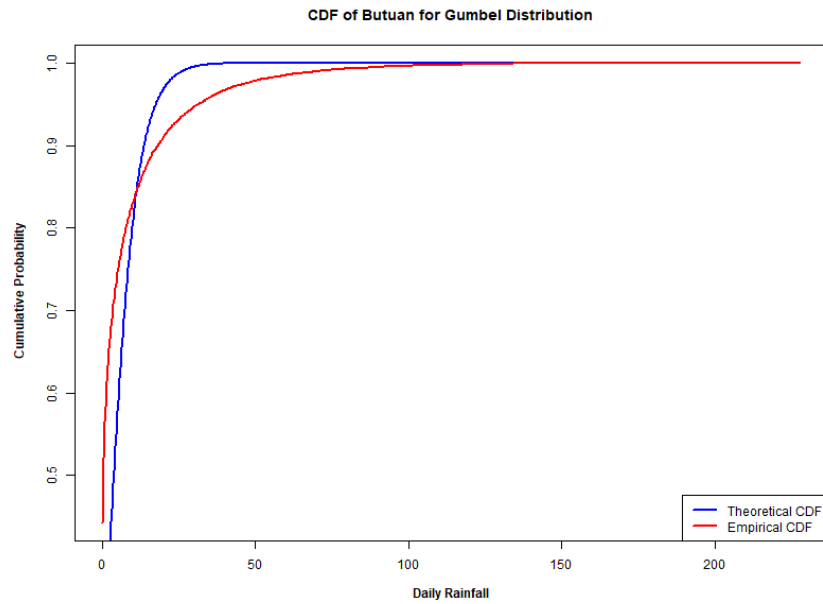
Figure A.11: CDF of Daily Rainfall for Malaybalay, and Surigao



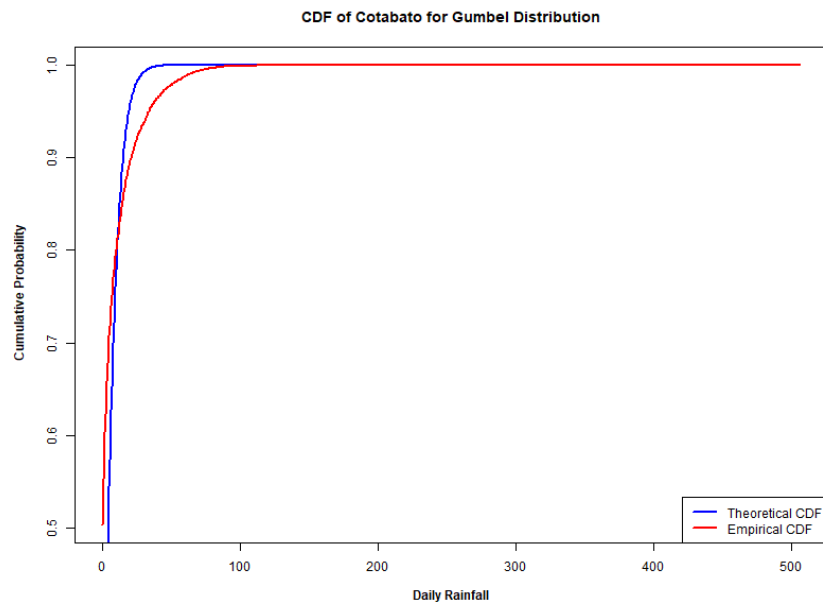
(a) Zamboanga

Figure A.12: CDF of Daily Rainfall for Zamboanga

A.1.3 Gumbel Distribution

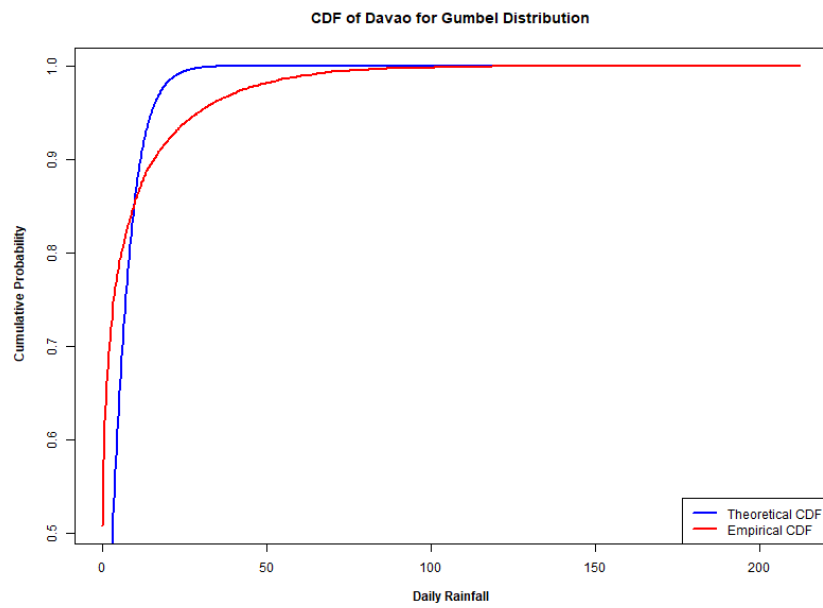


(a) Butuan

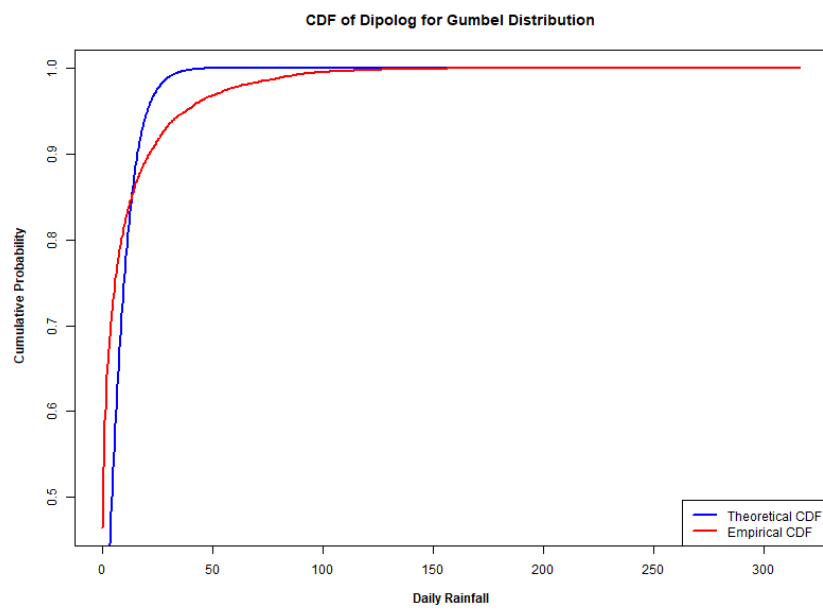


(b) Cotabato

Figure A.13: CDF of Daily Rainfall for Butuan, and Cotabato

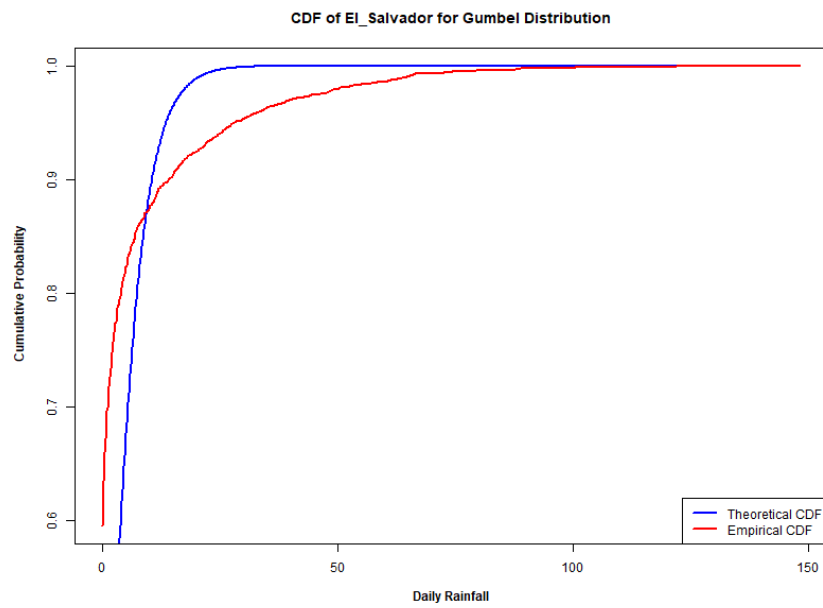


(a) Davao

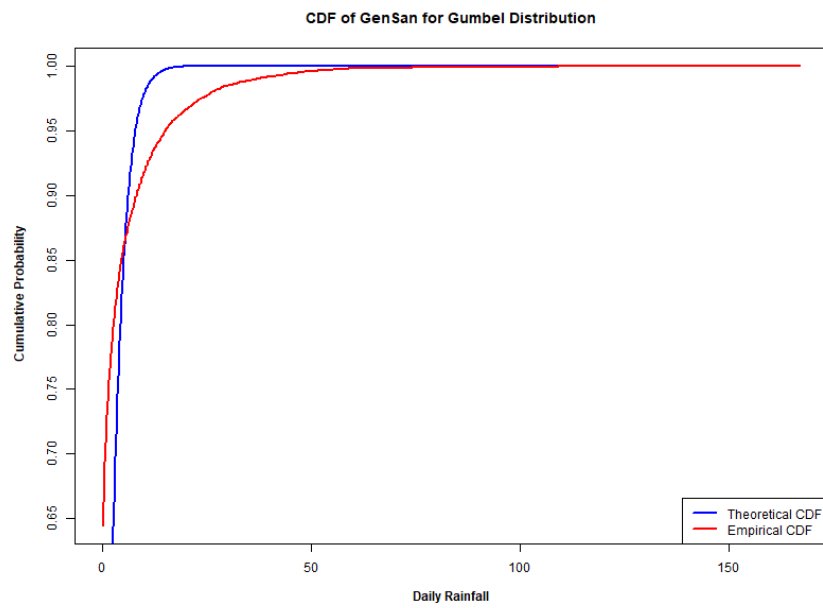


(b) Dipolog

Figure A.14: CDF of Daily Rainfall for Davao, and Dipolog

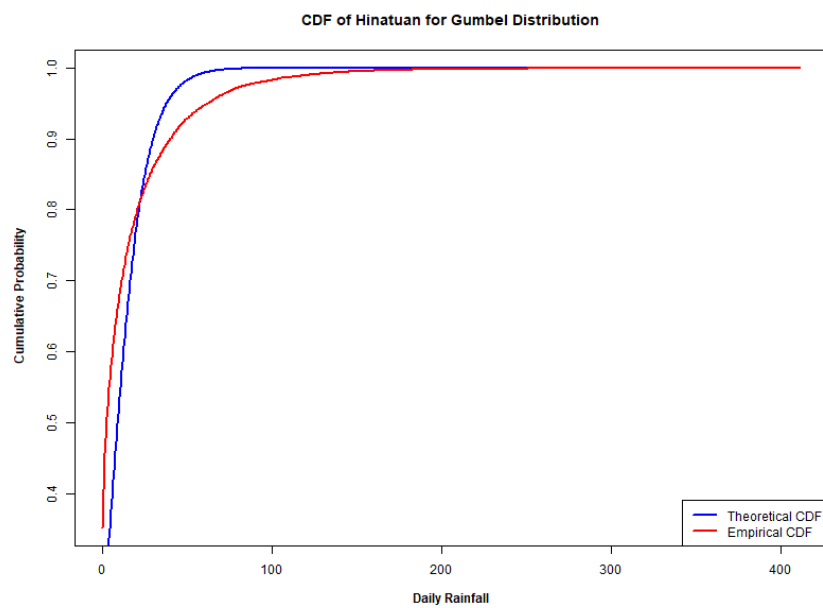


(a) El Salvador

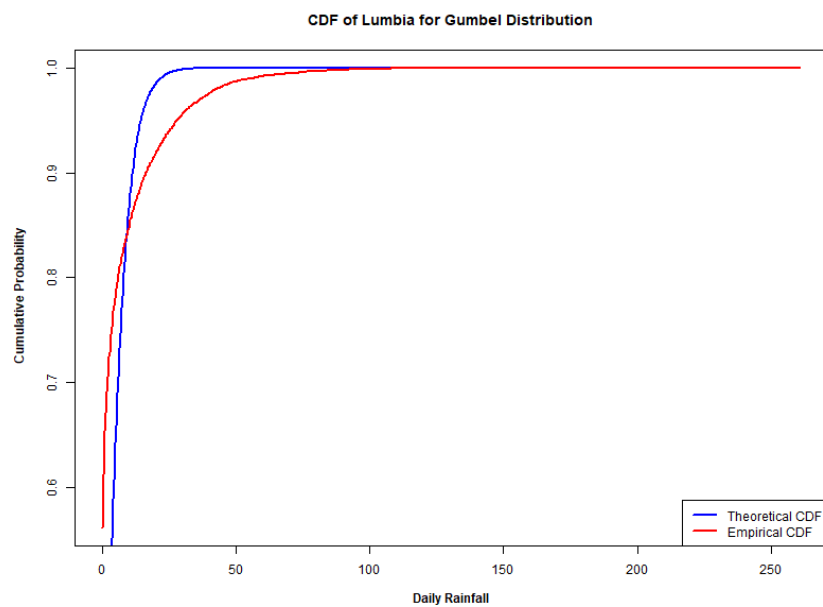


(b) General Santos

Figure A.15: CDF of Daily Rainfall for El Salvador, and General Santos

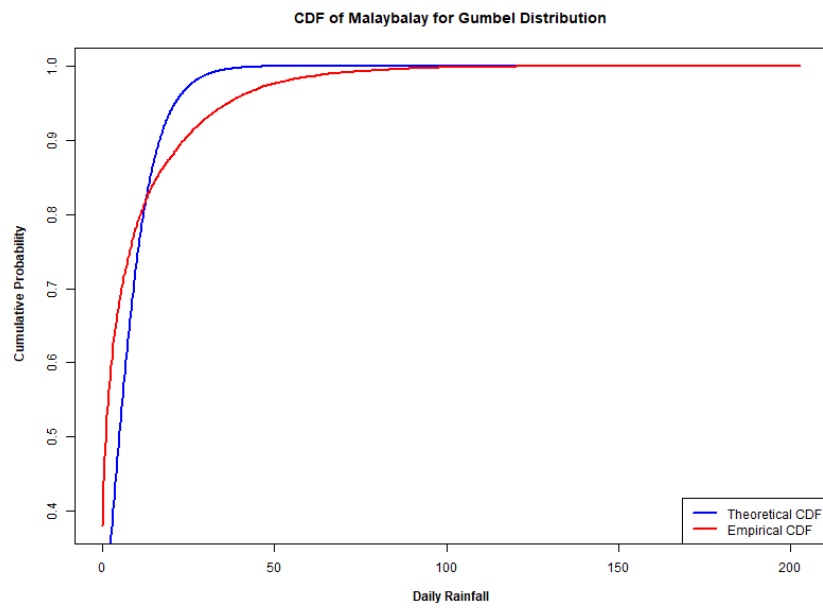


(a) Hinatuan

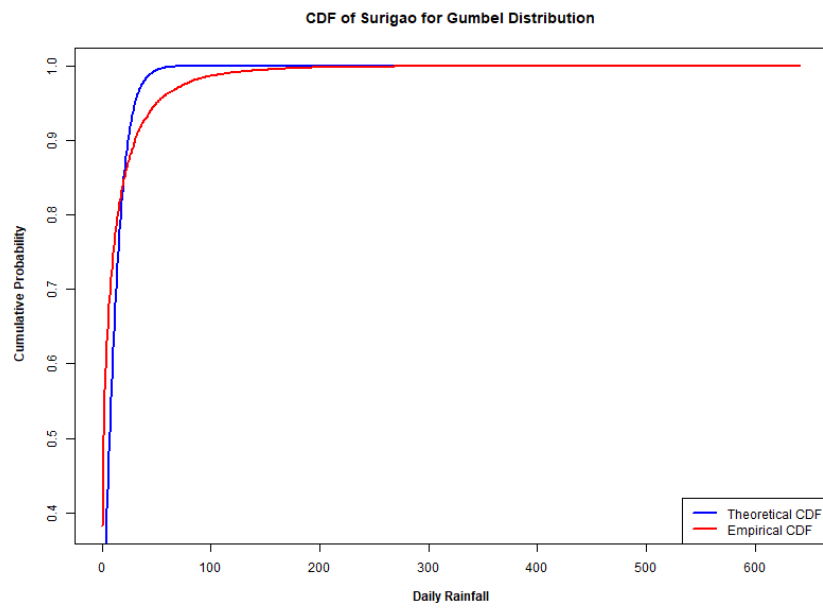


(b) Lumbia

Figure A.16: CDF of Daily Rainfall for Hinatuan, and Lumbia

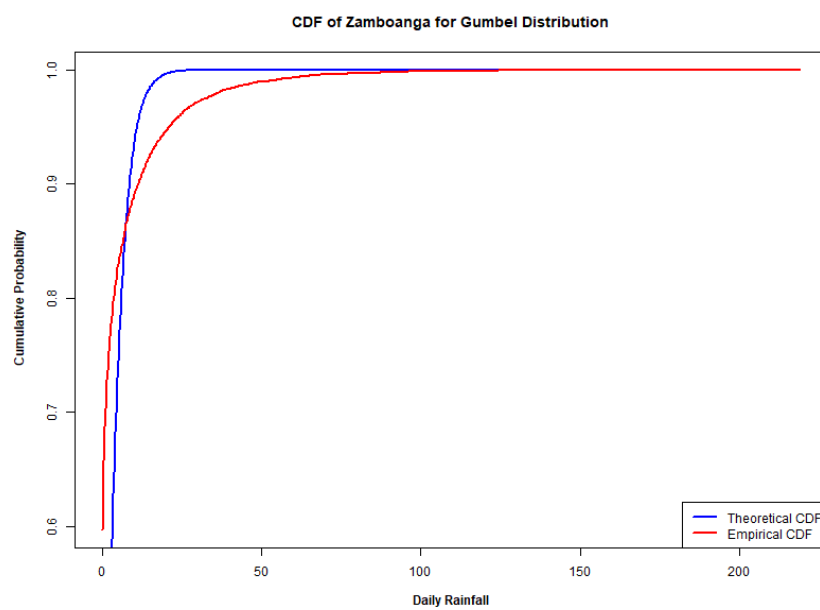


(a) Malaybalay



(b) Surigao

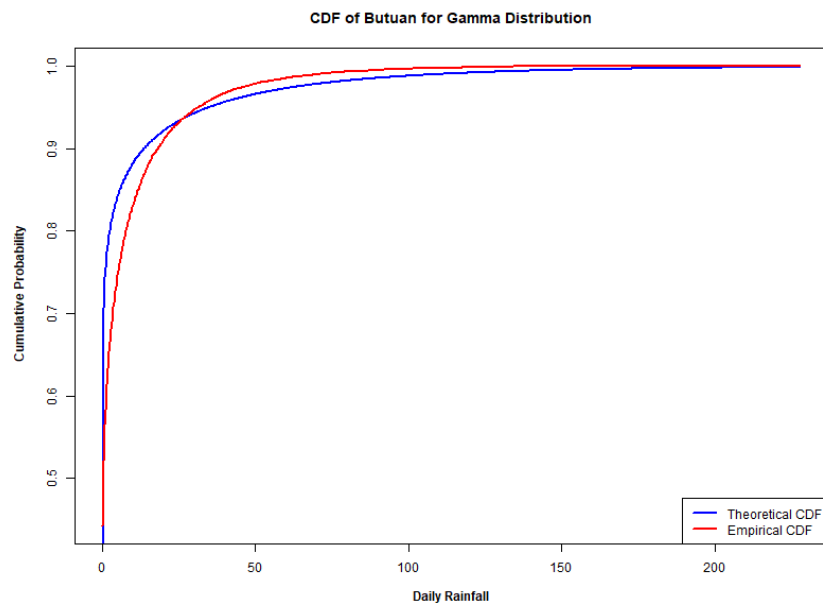
Figure A.17: CDF of Daily Rainfall for Malaybalay, and Surigao



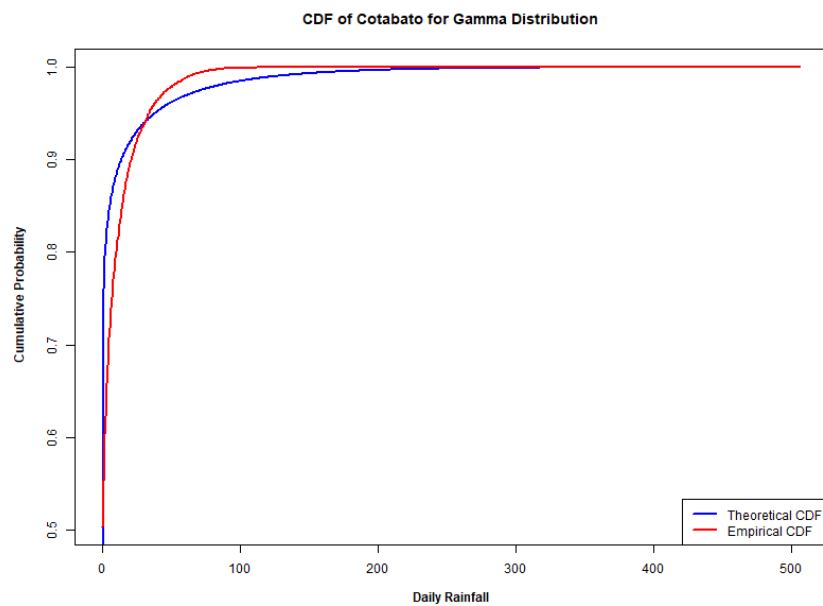
(a) Zamboanga

Figure A.18: CDF of Daily Rainfall for Zamboanga

A.1.4 Gamma Distribution

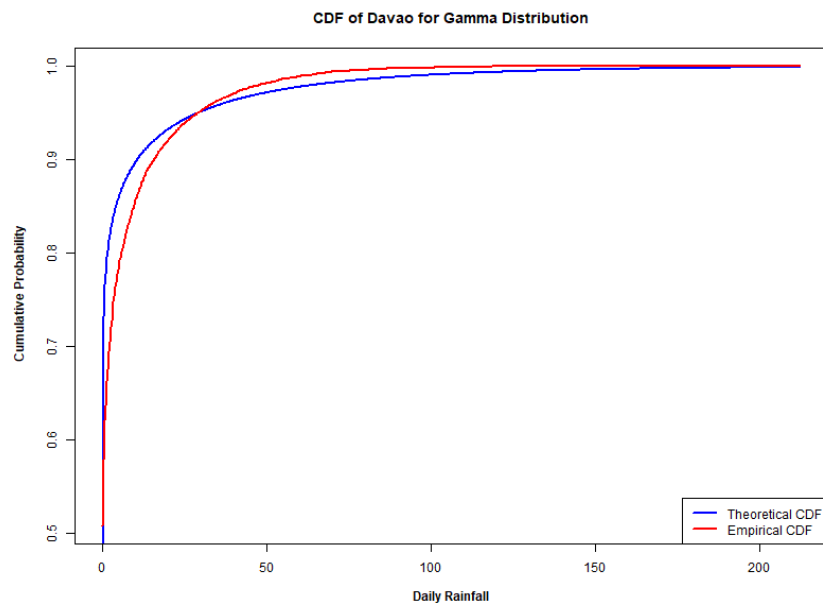


(a) Butuan

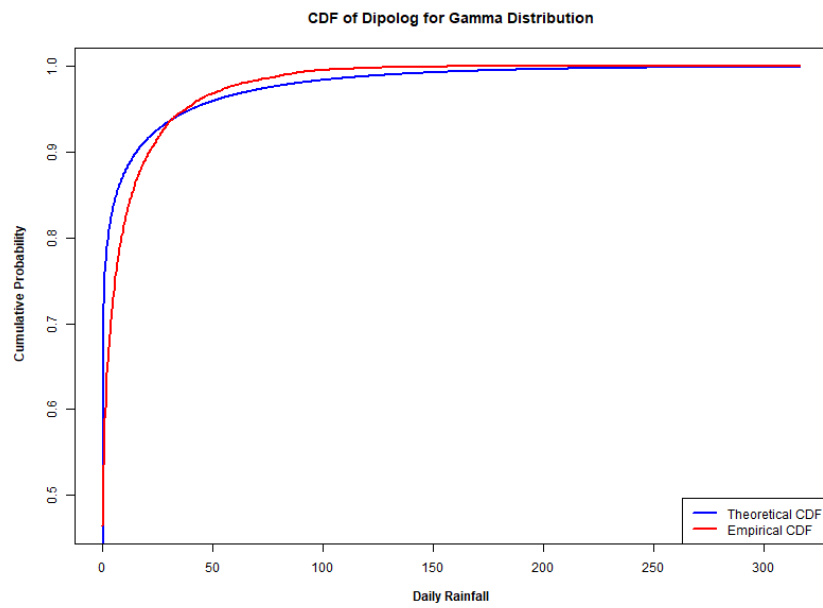


(b) Cotabato

Figure A.19: CDF of Daily Rainfall for Butuan, and Cotabato

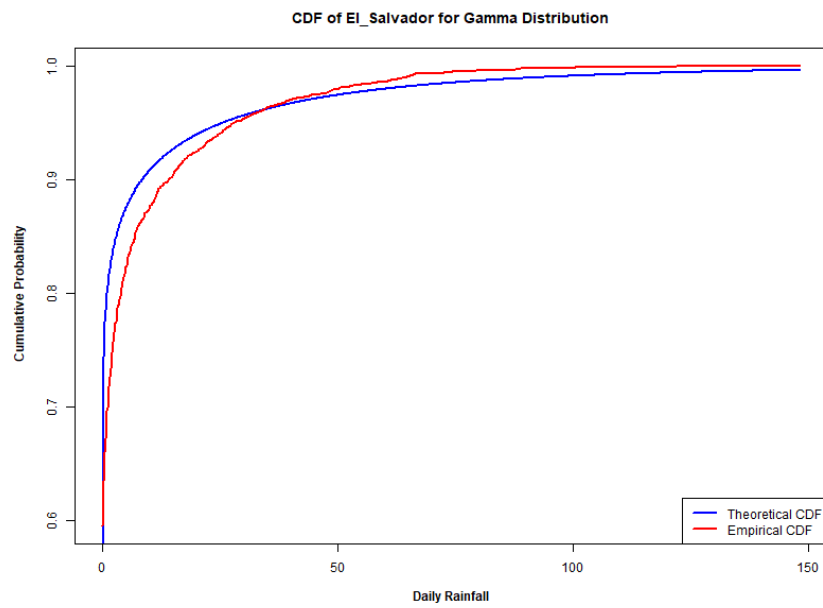


(a) Davao

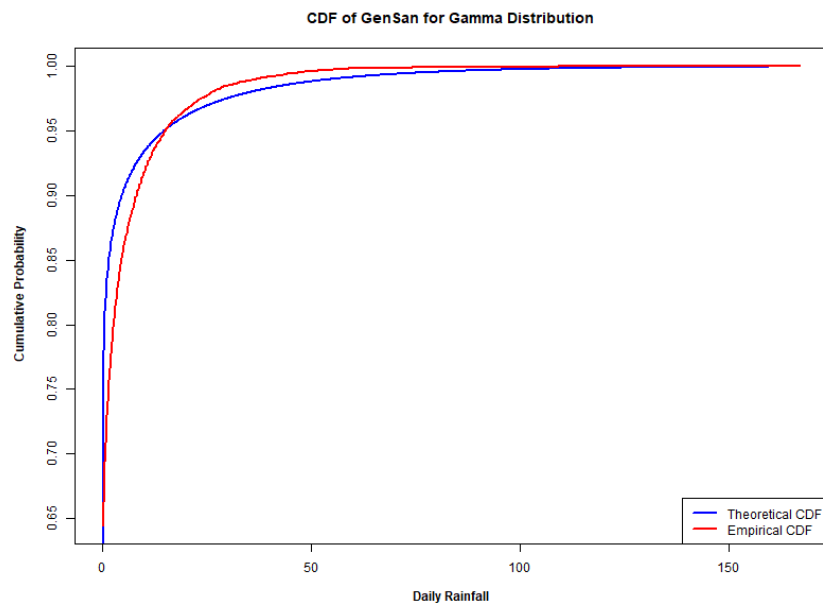


(b) Dipolog

Figure A.20: CDF of Daily Rainfall for Davao, and Dipolog

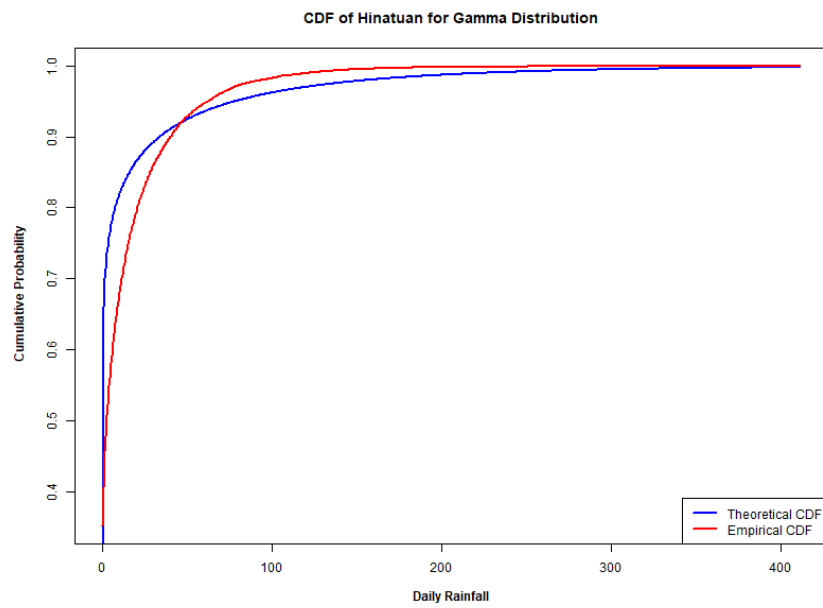


(a) El Salvador

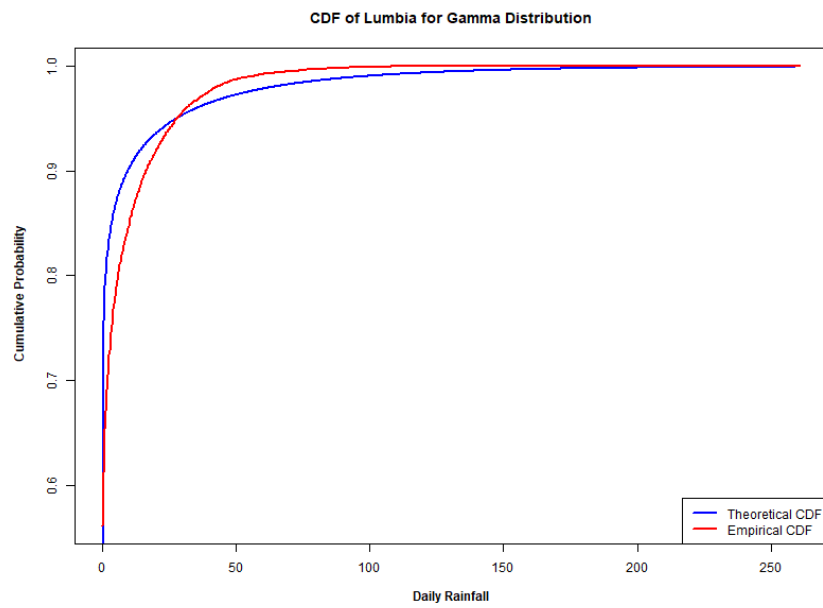


(b) General Santos

Figure A.21: CDF of Daily Rainfall for El Salvador, and General Santos

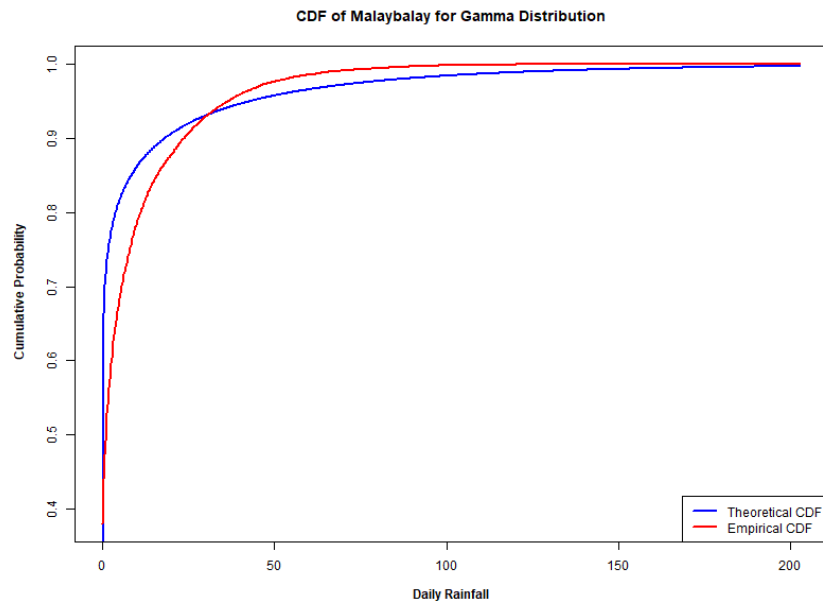


(a) Hinatuan

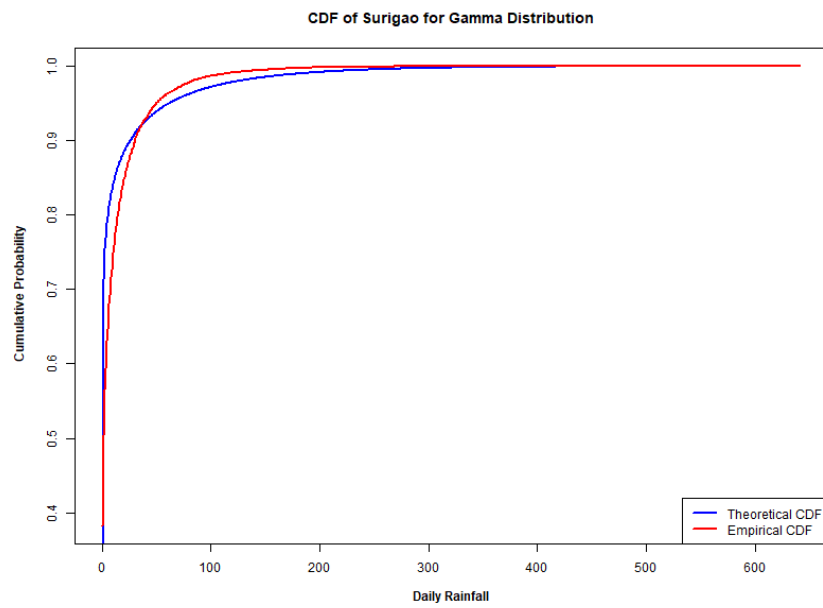


(b) Lumbia

Figure A.22: CDF of Daily Rainfall for Hinatuan, and Lumbia

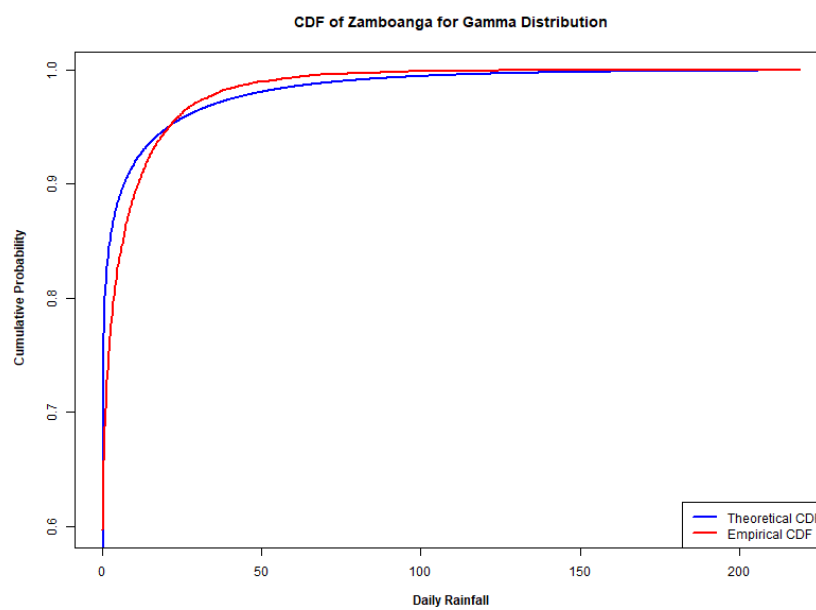


(a) Malaybalay



(b) Surigao

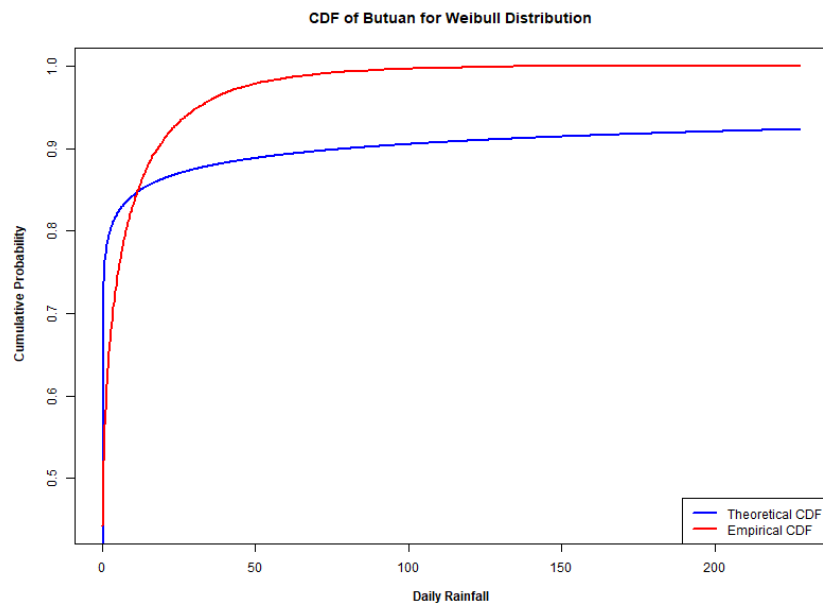
Figure A.23: CDF of Daily Rainfall for Malaybalay, and Surigao



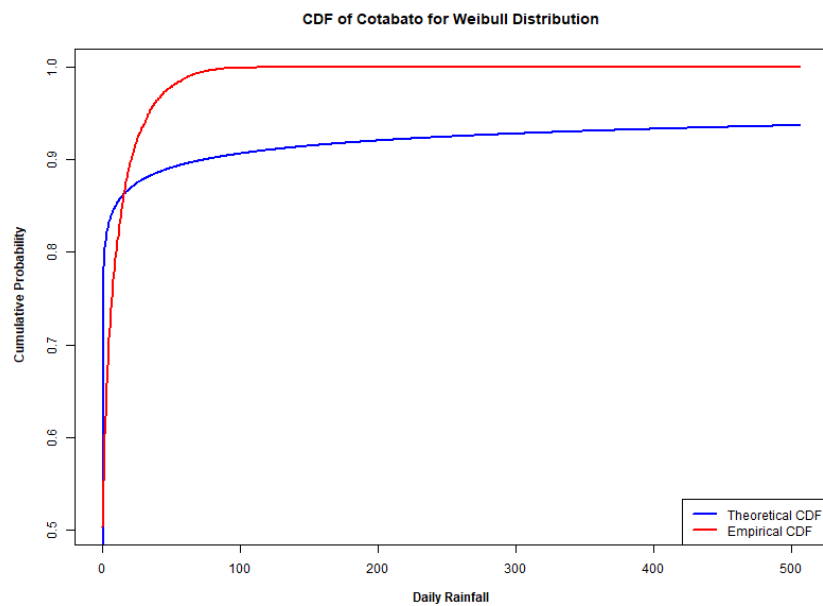
(a) Zamboanga

Figure A.24: CDF of Daily Rainfall for Zamboanga

A.1.5 Weibull Distribution

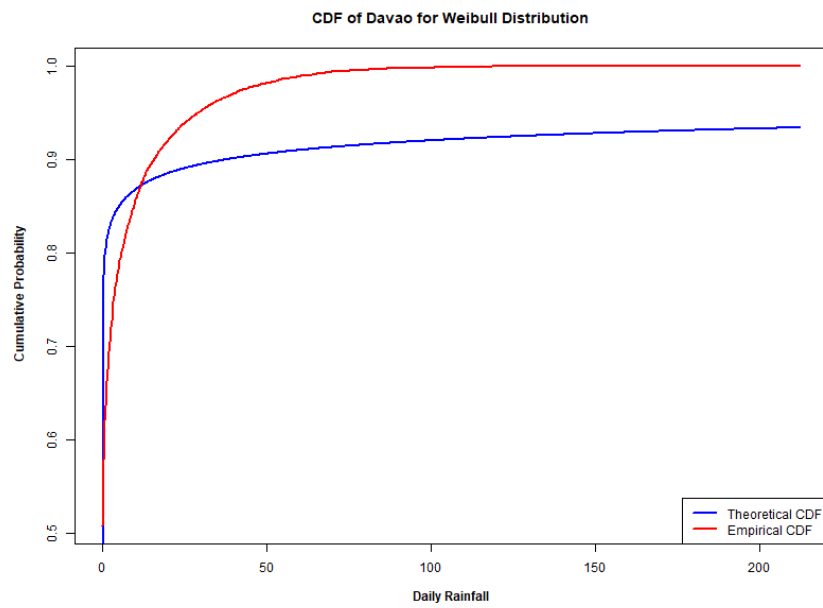


(a) Butuan

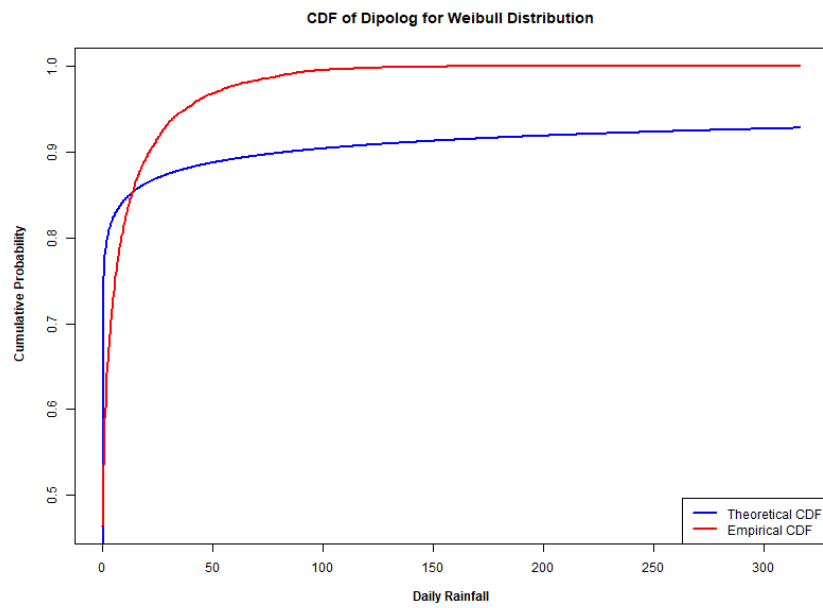


(b) Cotabato

Figure A.25: CDF of Daily Rainfall for Butuan, and Cotabato

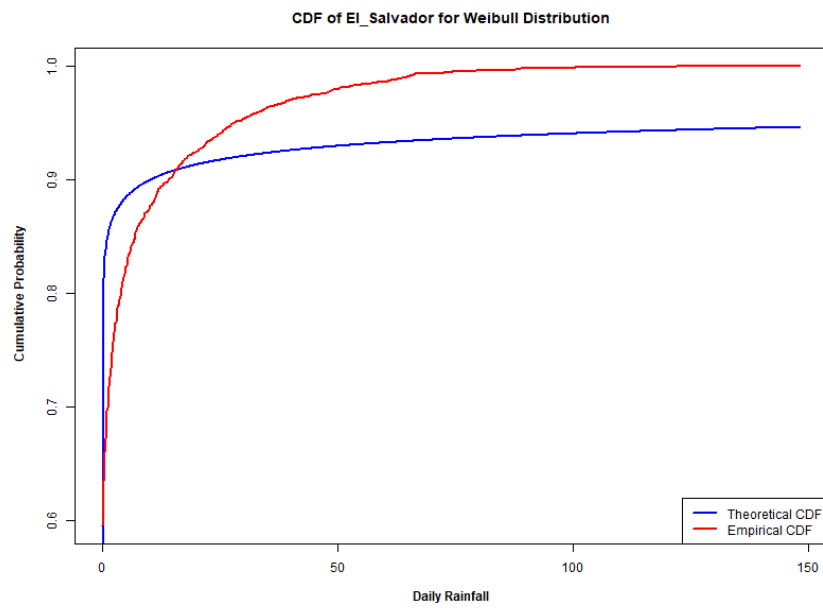


(a) Davao

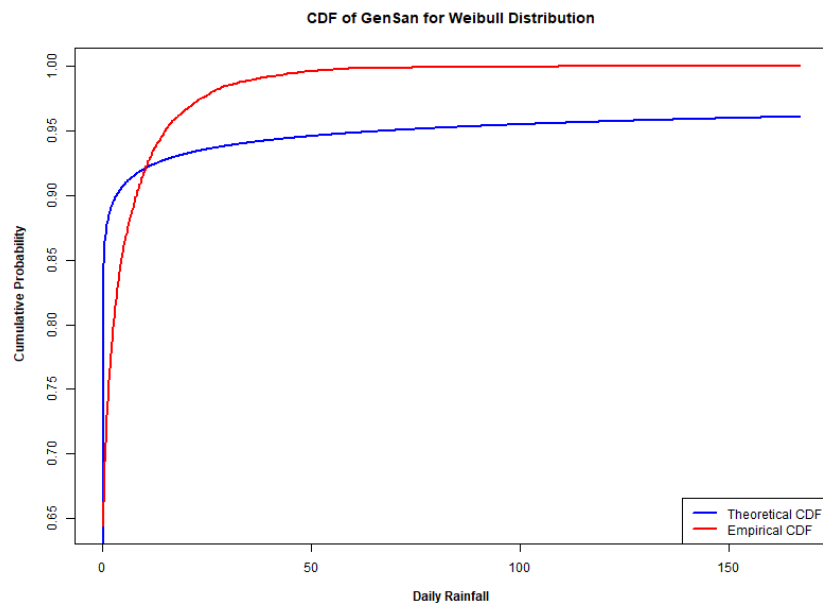


(b) Dipolog

Figure A.26: CDF of Daily Rainfall for Davao, and Dipolog

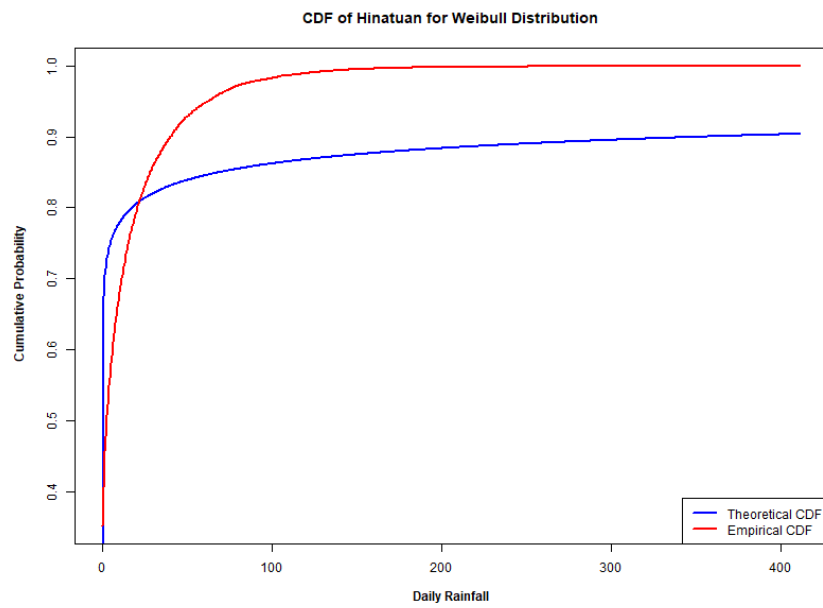


(a) El Salvador

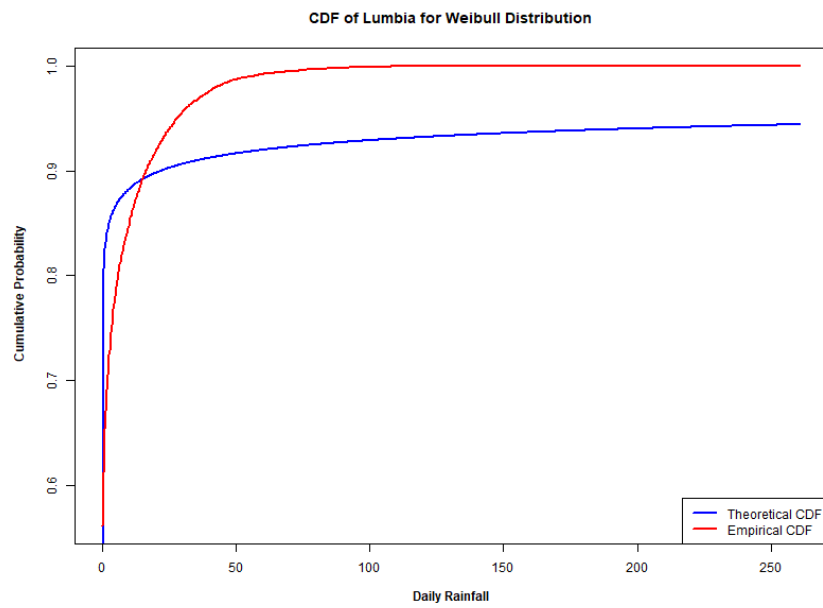


(b) General Santos

Figure A.27: CDF of Daily Rainfall for El Salvador, and General Santos

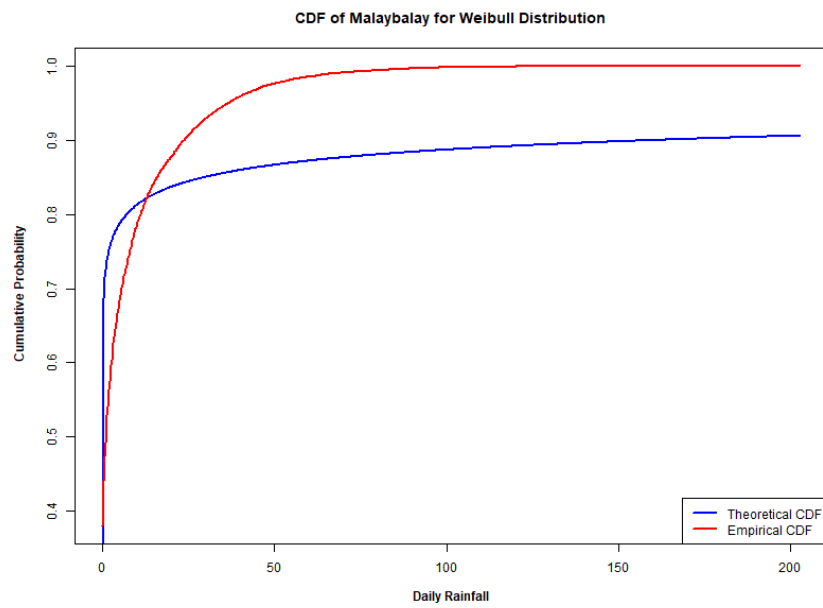


(a) Hinatuan

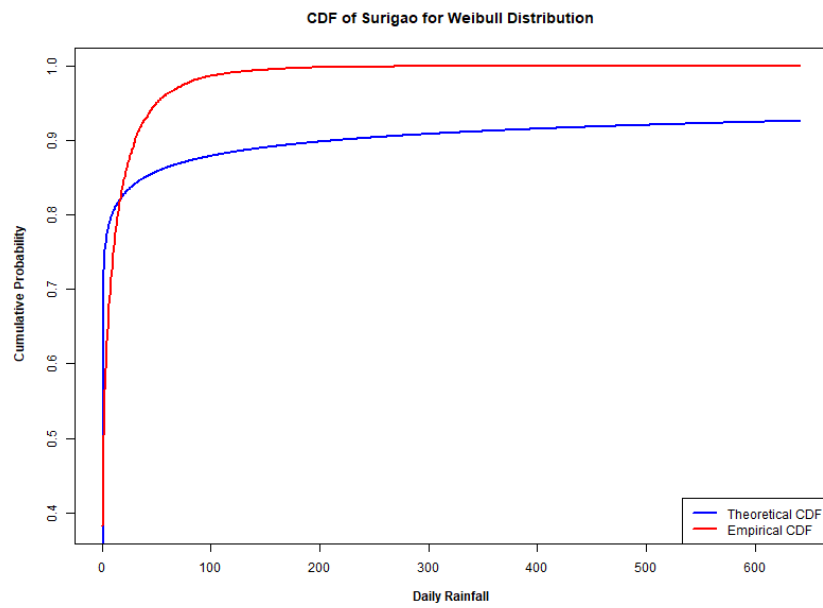


(b) Lumbia

Figure A.28: CDF of Daily Rainfall for Hinatuan, and Lumbia

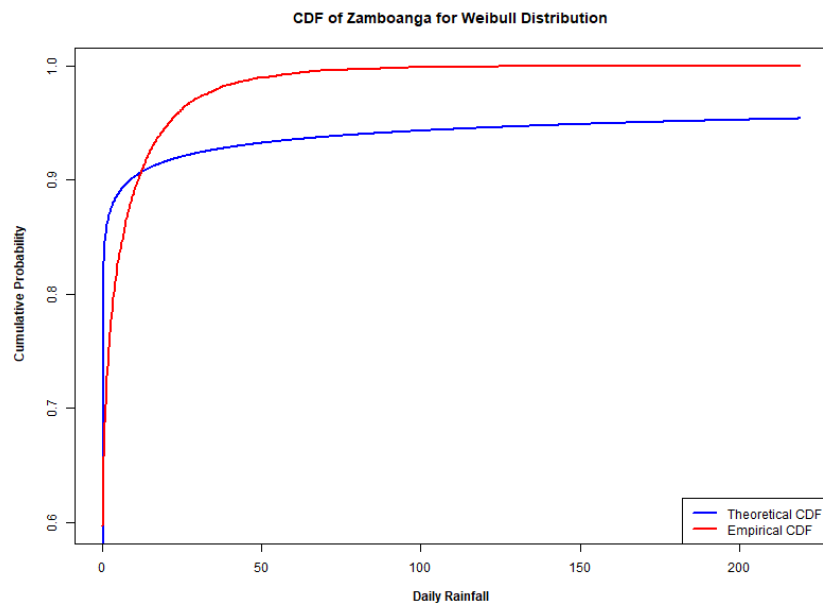


(a) Malaybalay



(b) Surigao

Figure A.29: CDF of Daily Rainfall for Malaybalay, and Surigao



(a) Zamboanga

Figure A.30: CDF of Daily Rainfall for Zamboanga

APPENDIX B

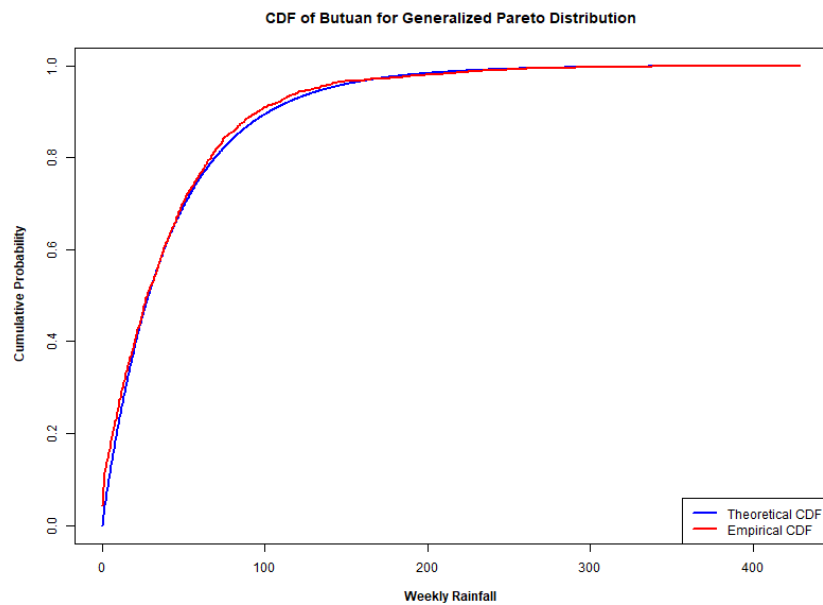
WEEKLY RAINFALL

This appendix presents cumulative probability distributions of weekly rainfall. The analysis in Chapter 4 Table 4.5 focuses on three probability distributions: Generalize Pareto (GPD) for three stations, Generalized Extreme-Value (GEV) distribution for eight stations and the Gumbel distribution for one station. These additional distributions are presented for those who want to explore the data further and compare different probability distributions.

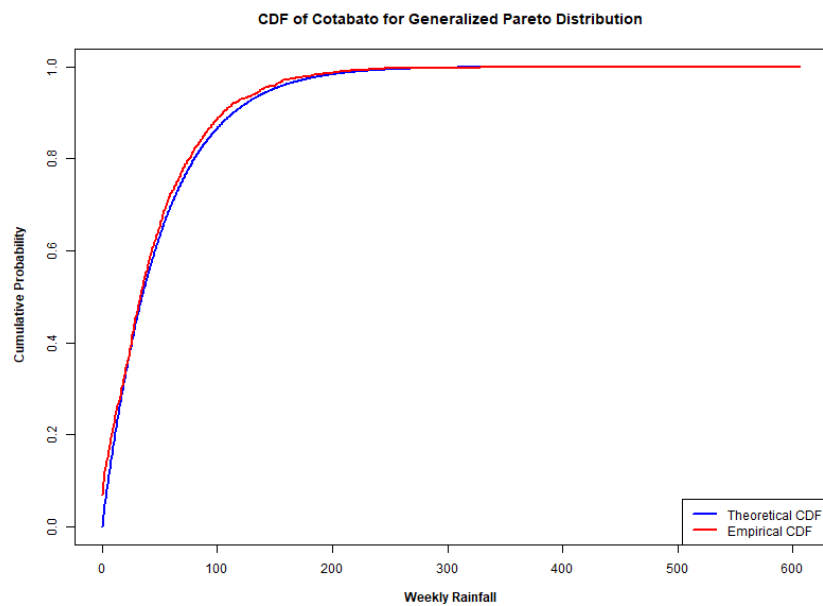
B.1 Cumulative Probability Distribution

The following figure shows the cumulative probability distribution of weekly rainfall for the five (5) probability distributions fitted in the study.

B.1.1 Generalized Pareto Distribution

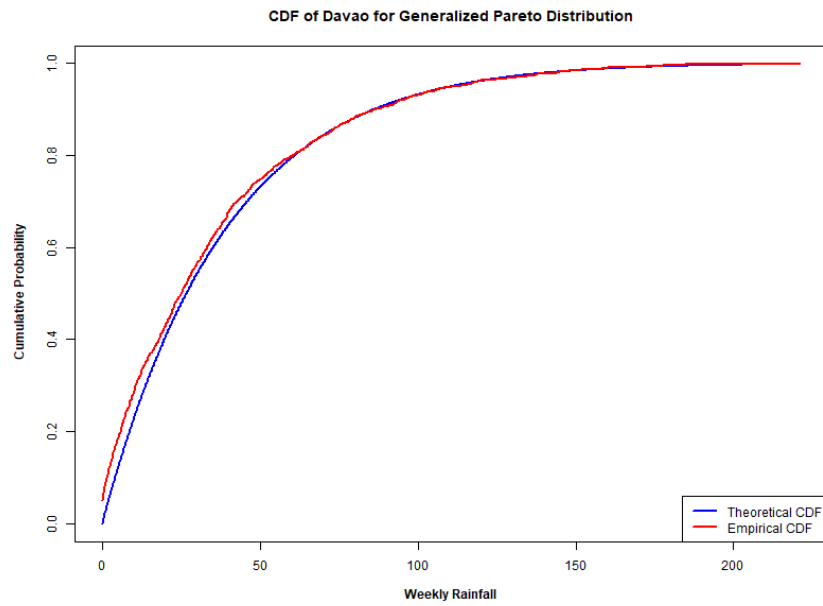


(a) Butuan

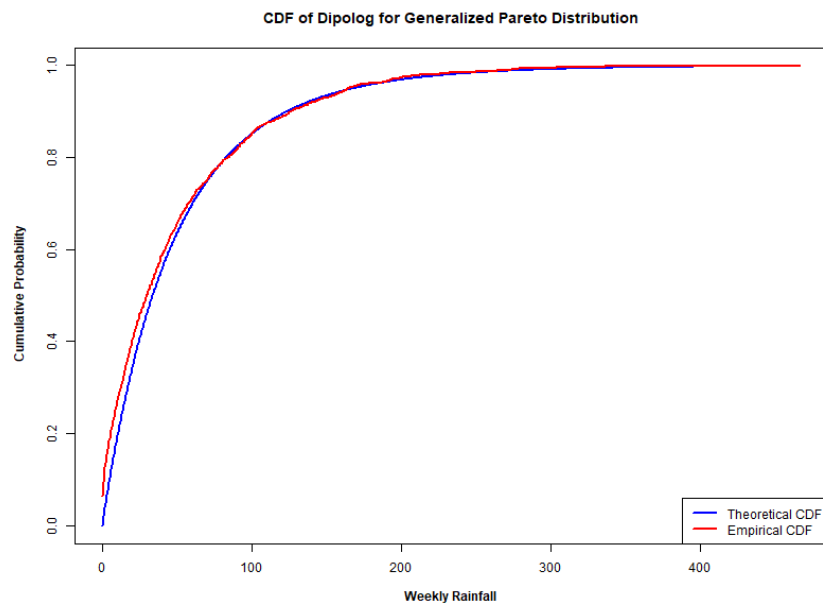


(b) Cotabato

Figure B.1: CDF of Daily Rainfall for Butuan, and Cotabato

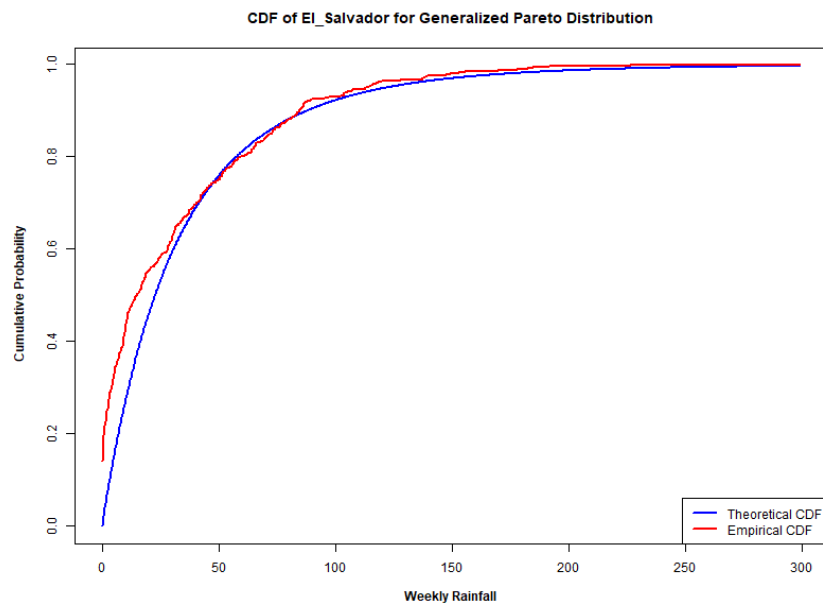


(a) Davao

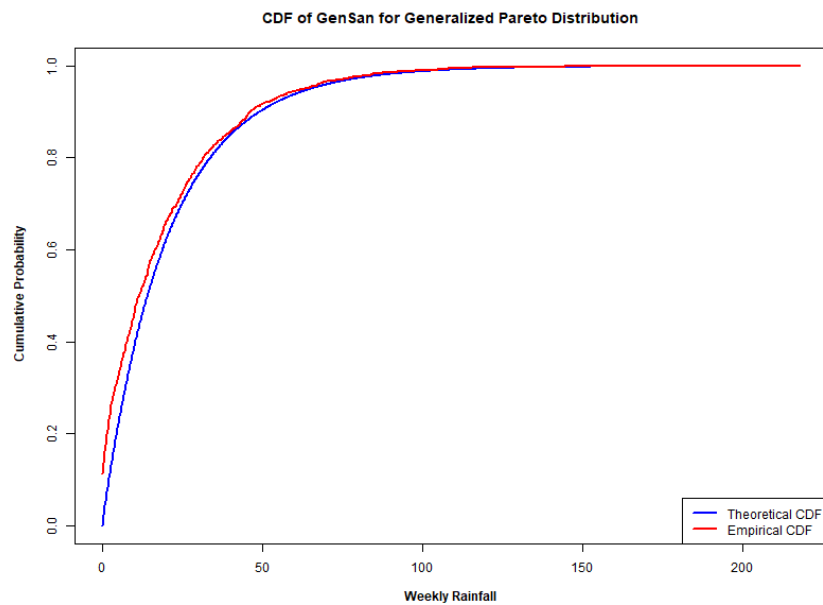


(b) Dipolog

Figure B.2: CDF of Daily Rainfall for Davao, and Dipolog

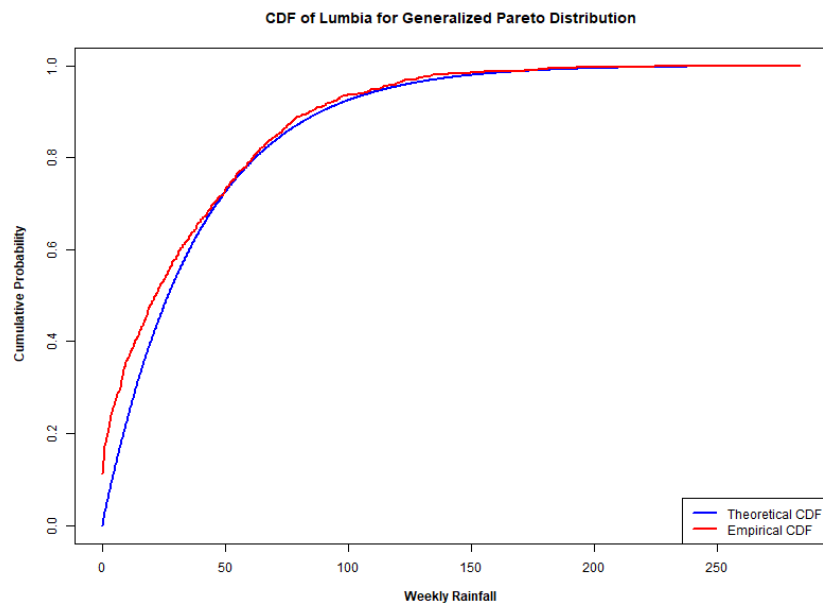


(a) El Salvador

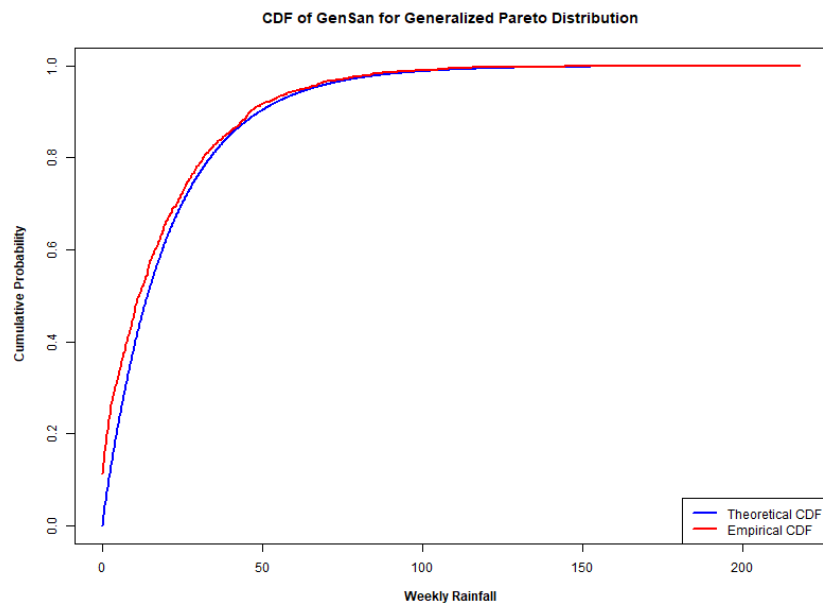


(b) General Santos

Figure B.3: CDF of Daily Rainfall for El Salvador, and General Santos

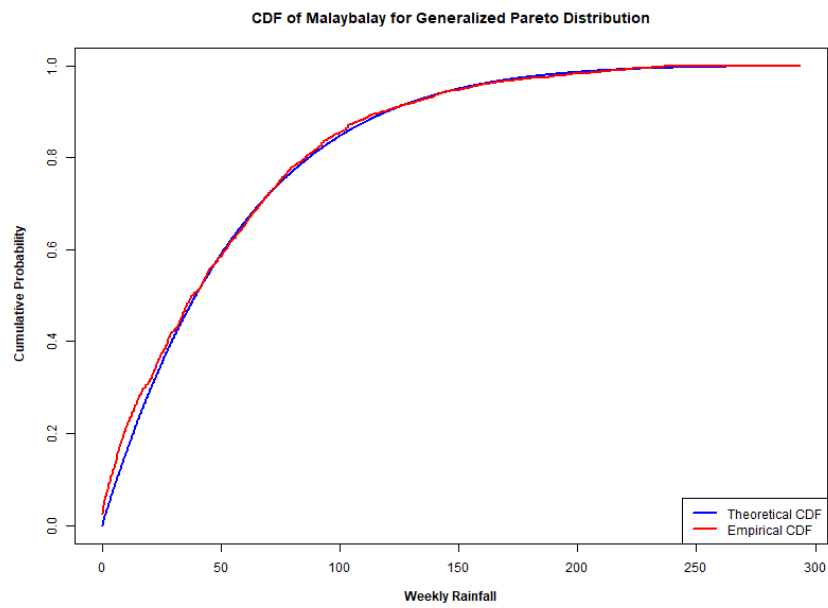


(a) Lumbia

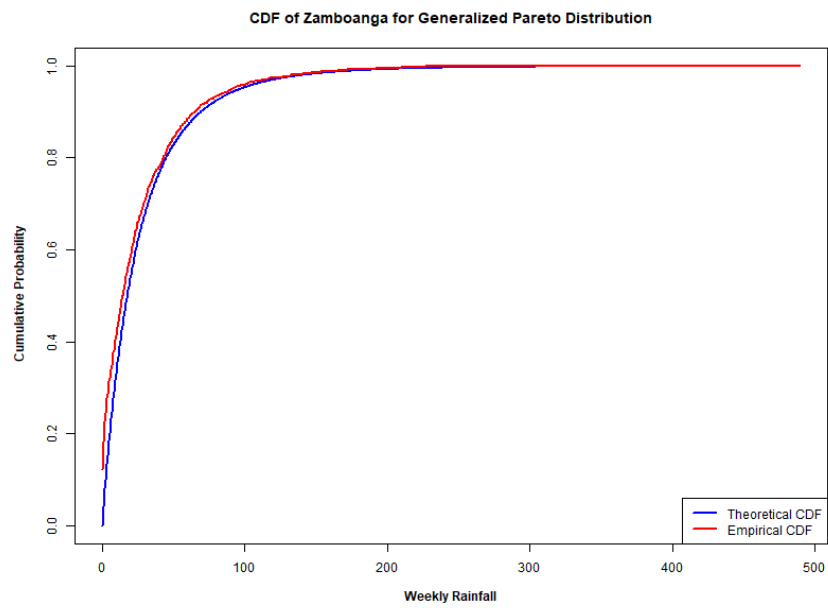


(b) Malaybalay

Figure B.4: CDF of Daily Rainfall for Lumbia, and Malaybalay



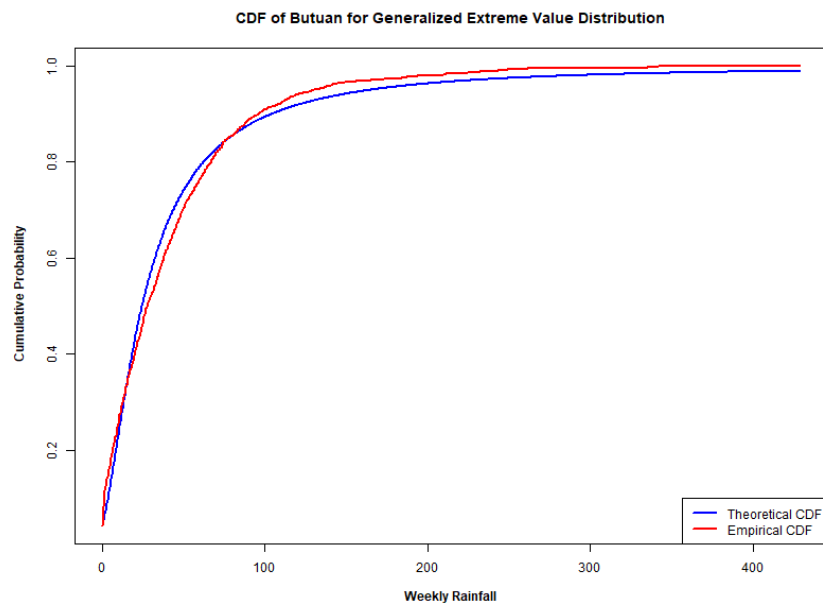
(a) Surigao



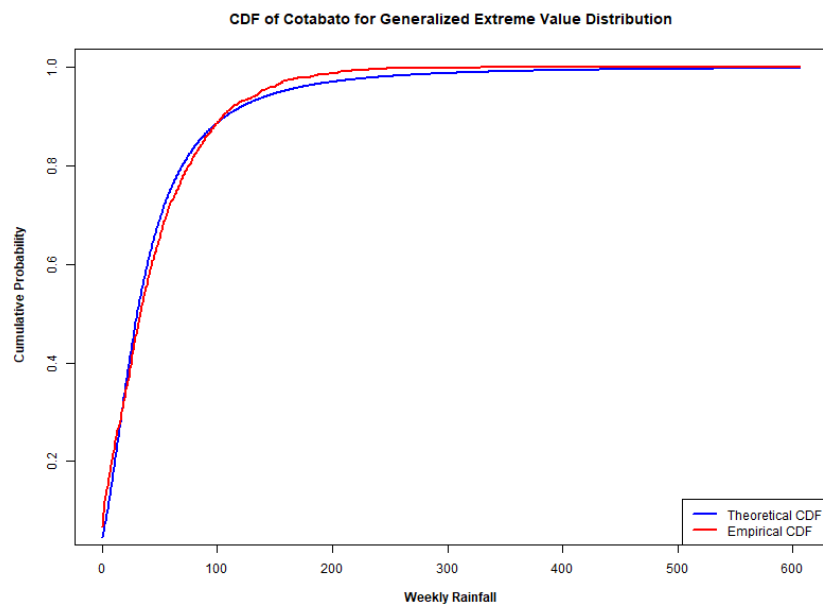
(b) Zamboanga

Figure B.5: CDF of Daily Rainfall for Surigao, and Hinatuan

B.1.2 Generalized Extreme-Value Distribution

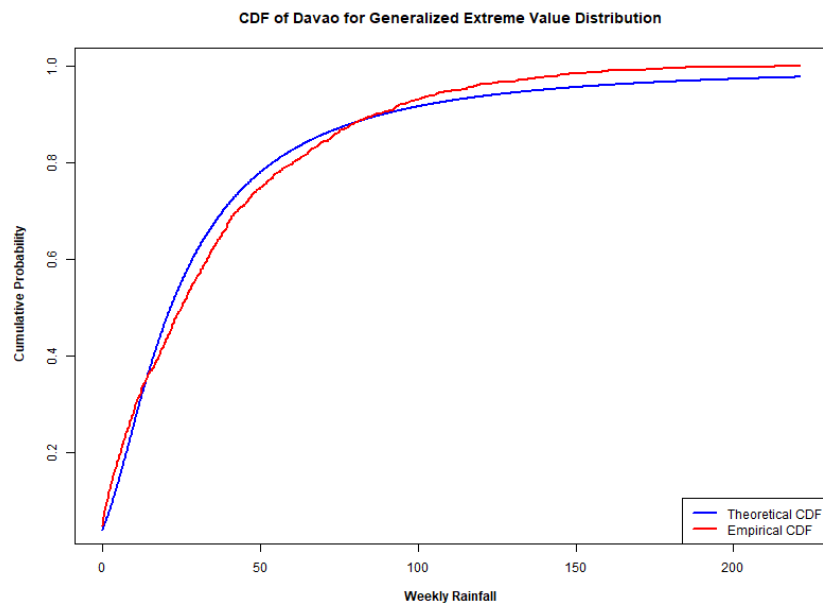


(a) Butuan

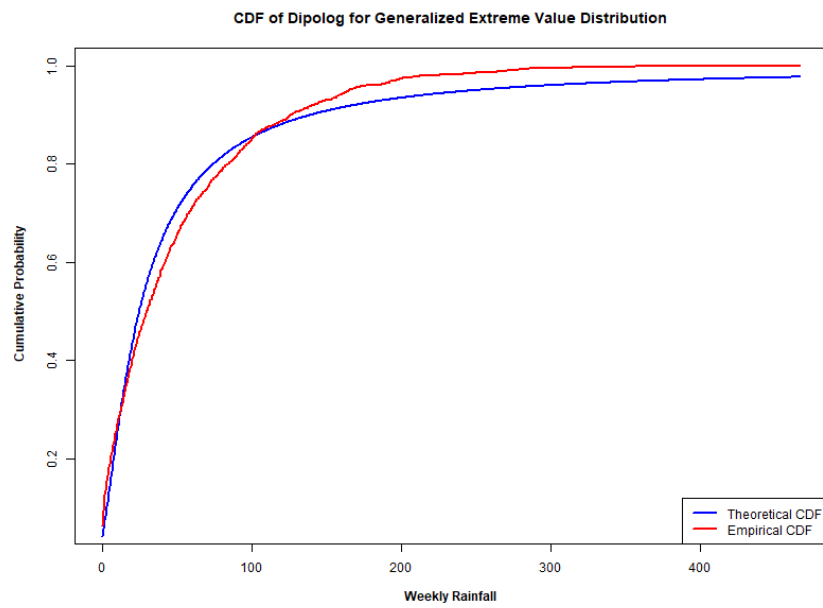


(b) Cotabato

Figure B.6: CDF of Daily Rainfall for Butuan, and Cotabato

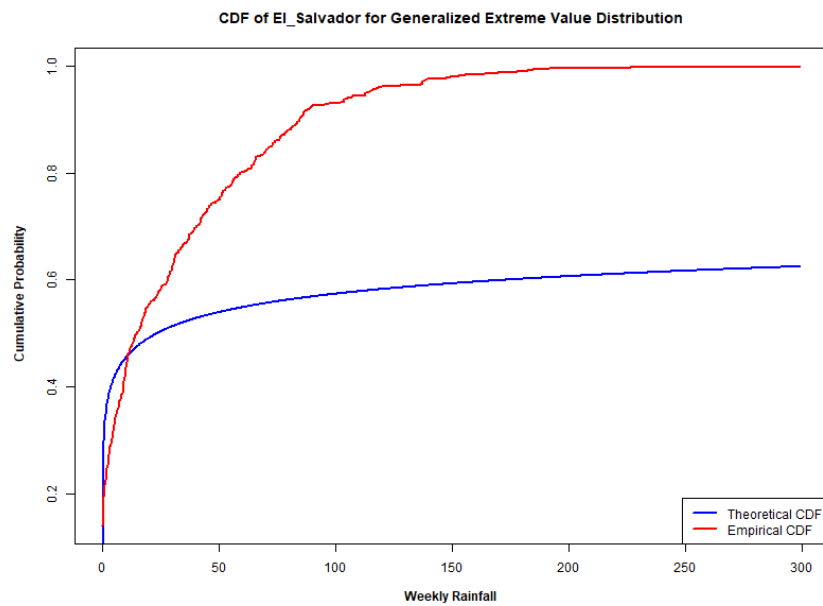


(a) Davao

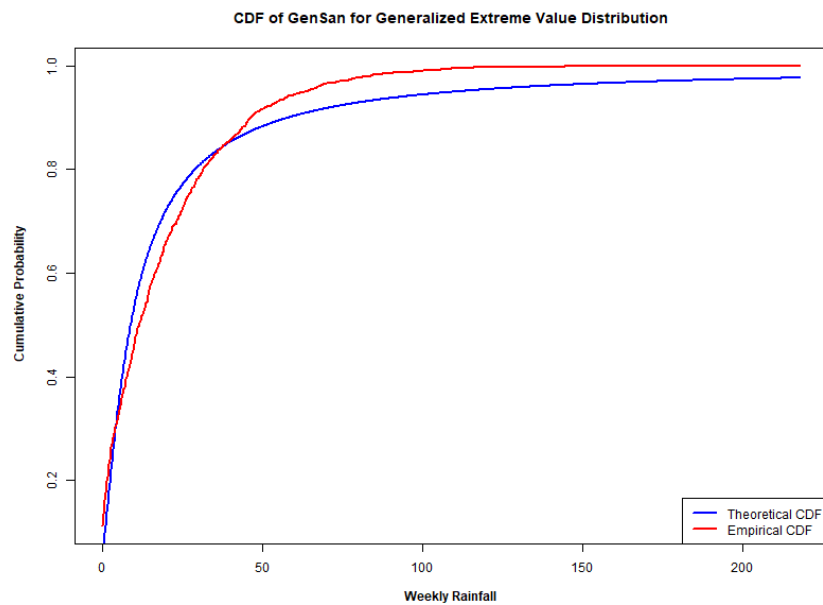


(b) Dipolog

Figure B.7: CDF of Daily Rainfall for Davao, and Dipolog

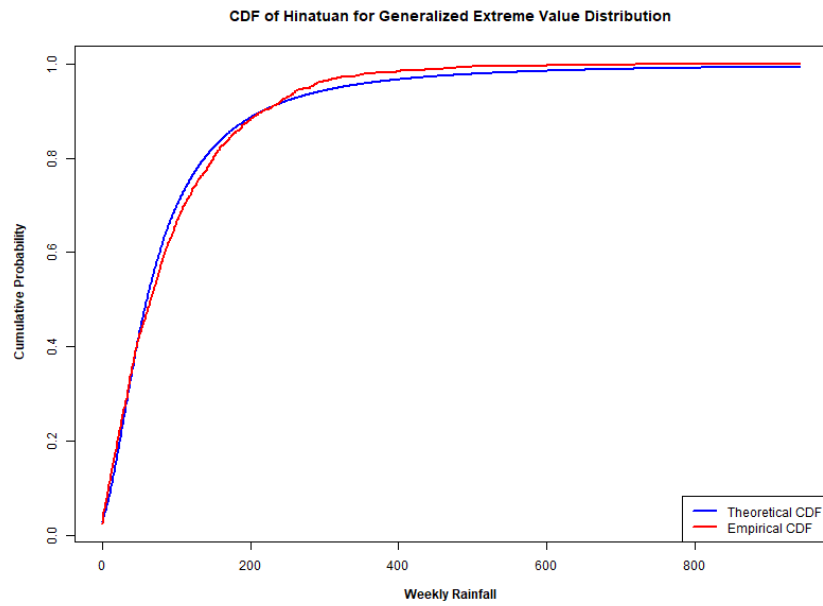


(a) El Salvador

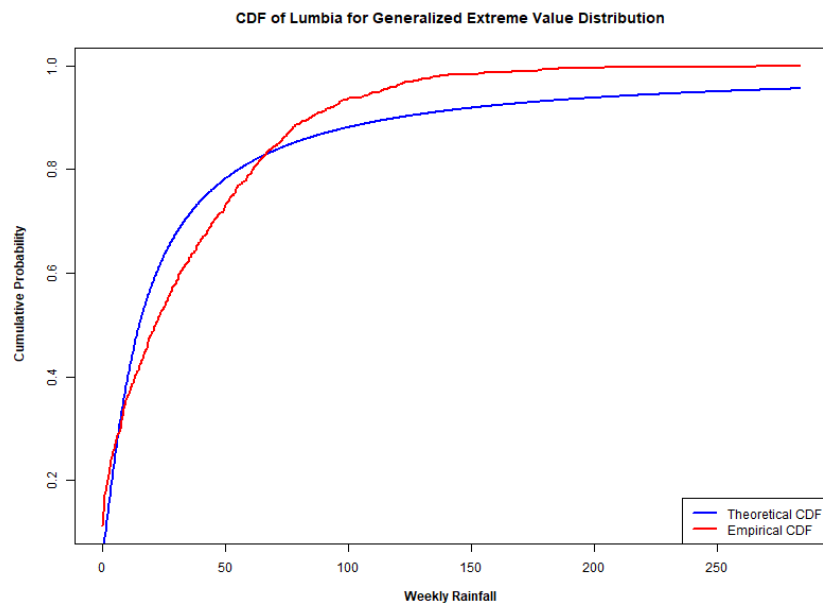


(b) General Santos

Figure B.8: CDF of Daily Rainfall for El Salvador, and General Santos

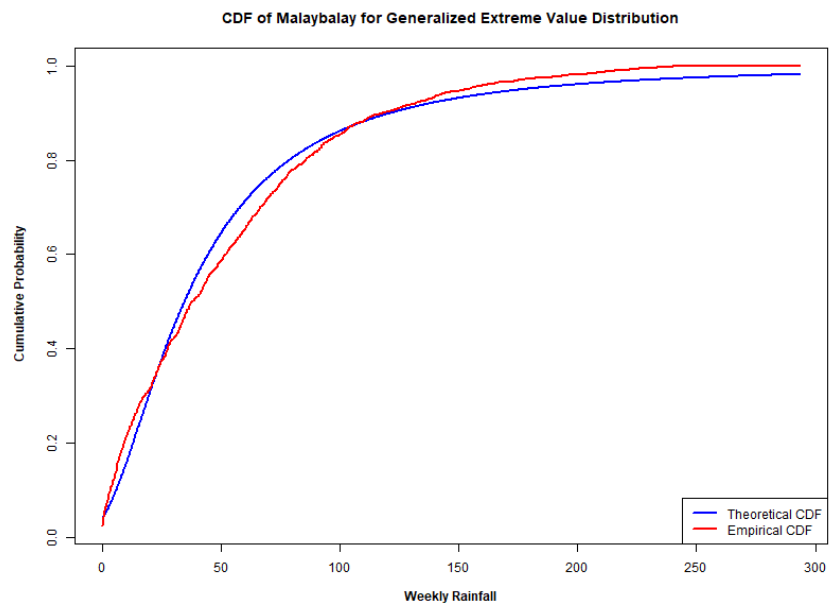


(a) Hinatuan

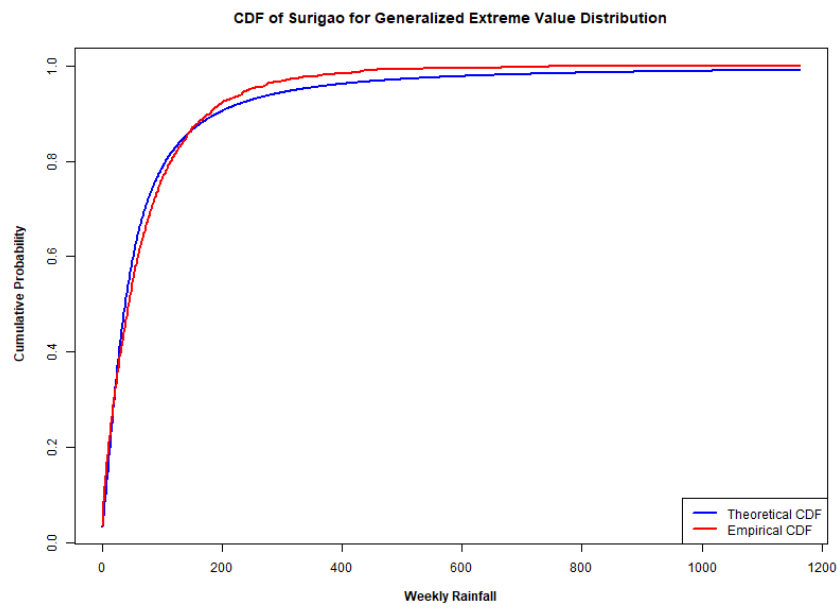


(b) Lumbia

Figure B.9: CDF of Daily Rainfall for Hinatuan, and Lumbia

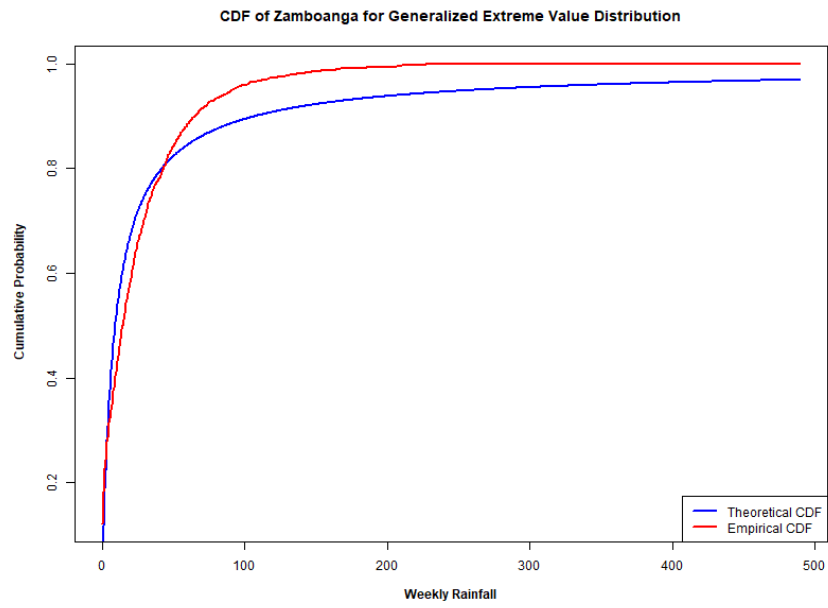


(a) Malaybalay



(b) Surigao

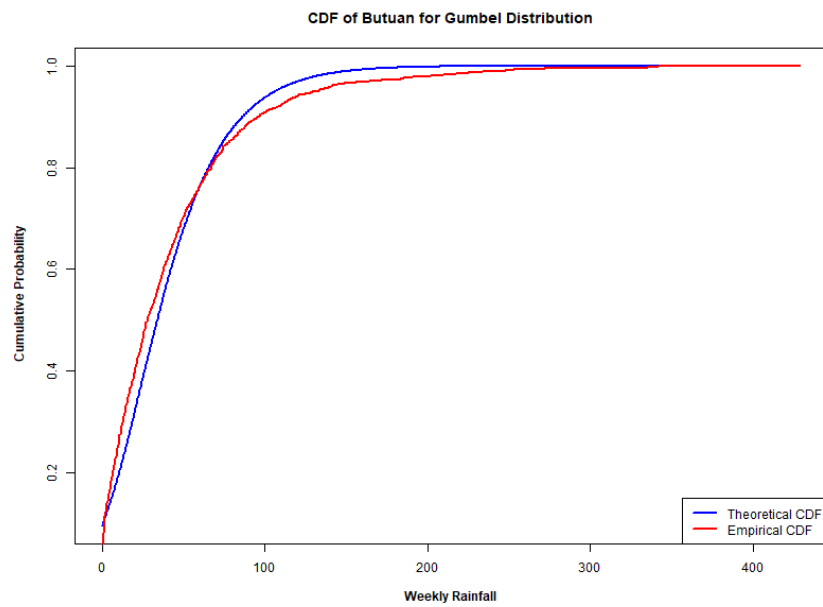
Figure B.10: CDF of Daily Rainfall for Malaybalay, and Surigao



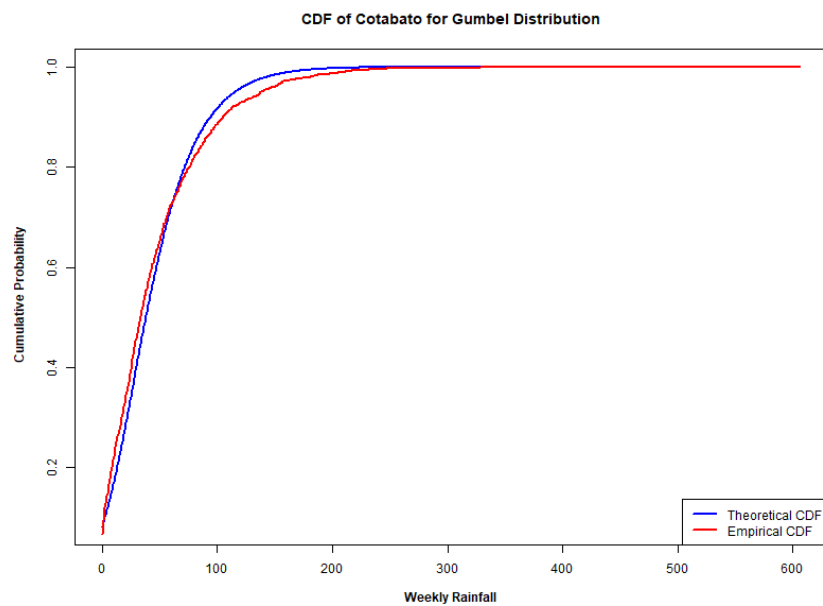
(a) Zamboanga

Figure B.11: CDF of Daily Rainfall for Zamboanga

B.1.3 Gumbel Distribution

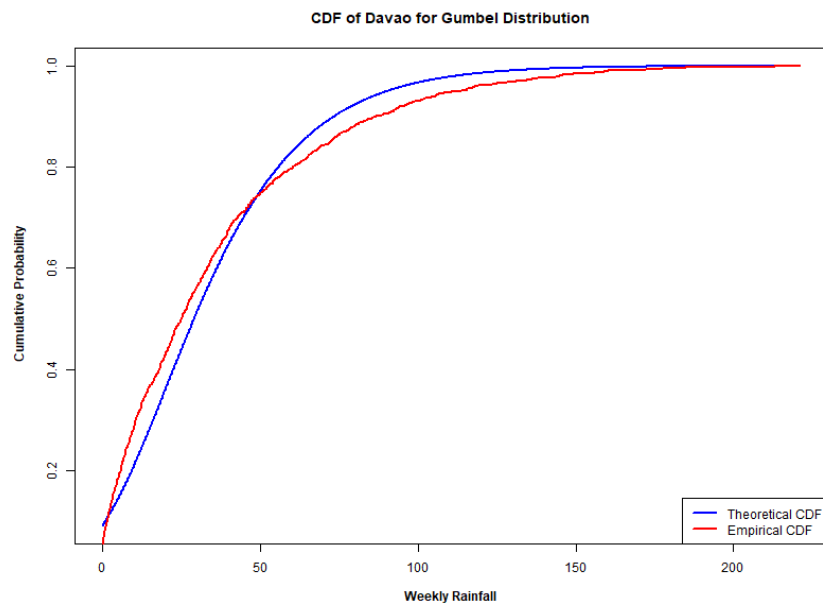


(a) Butuan

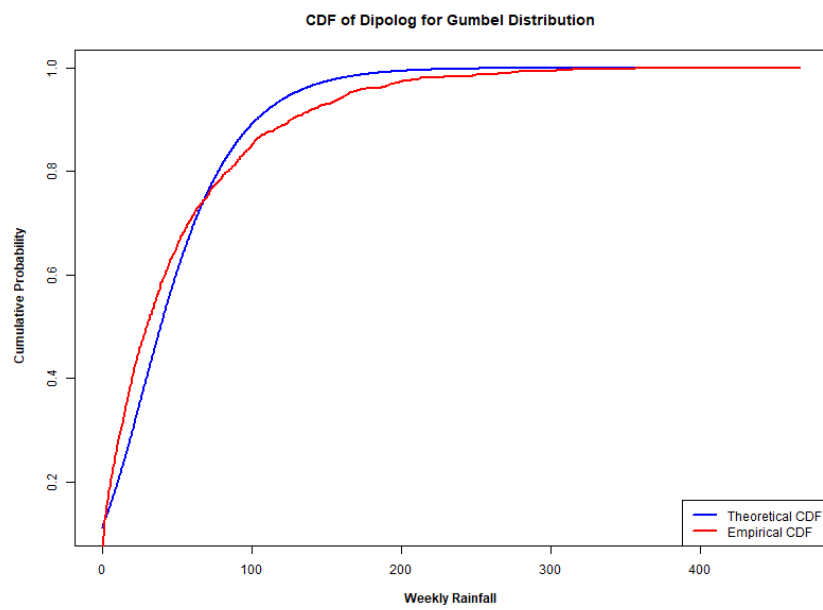


(b) Cotabato

Figure B.12: CDF of Daily Rainfall for Butuan, and Cotabato

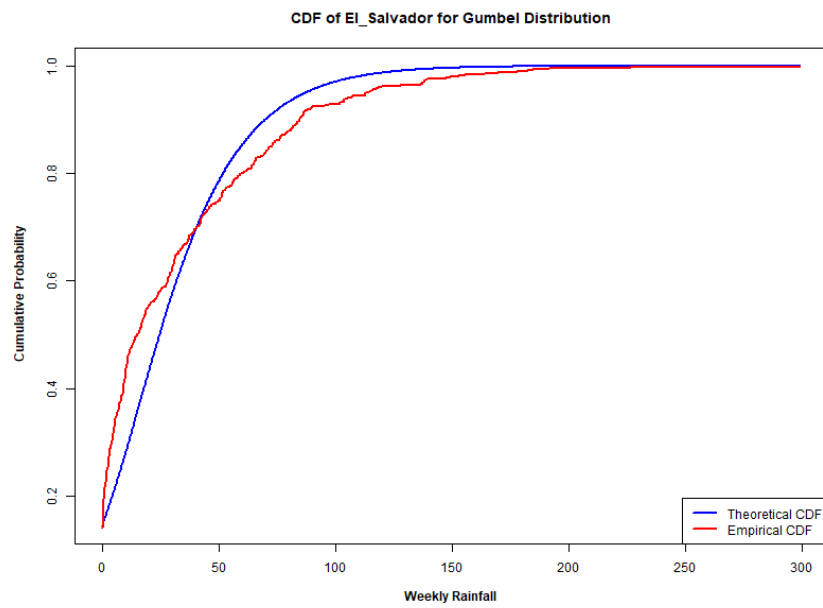


(a) Davao

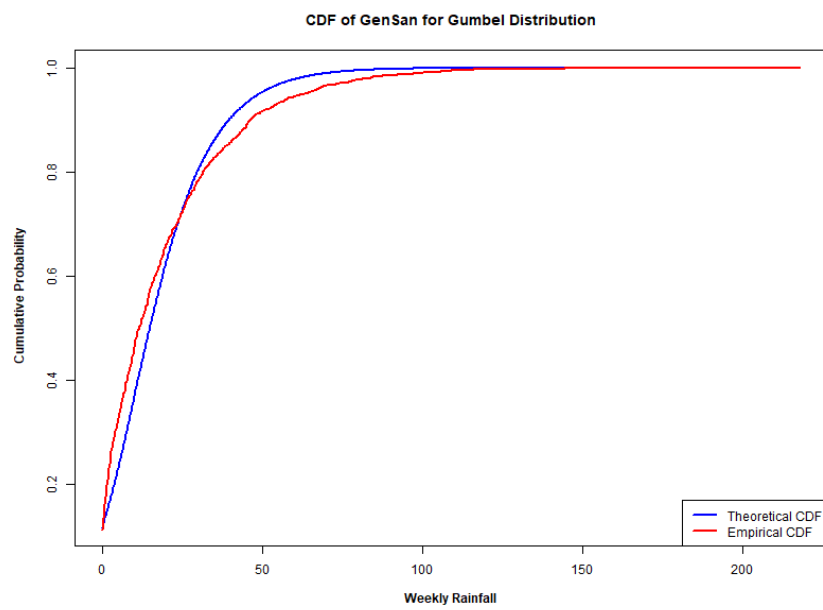


(b) Dipolog

Figure B.13: CDF of Daily Rainfall for Davao, and Dipolog

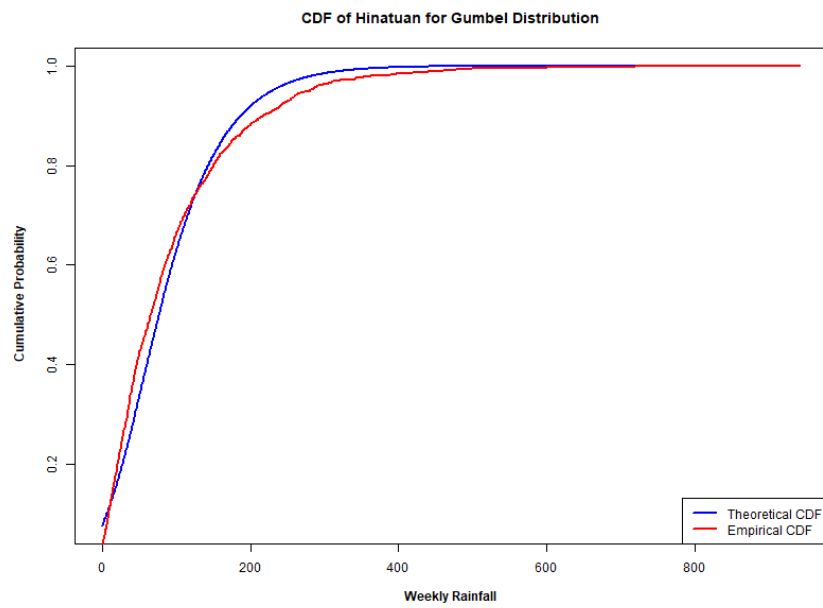


(a) El Salvador

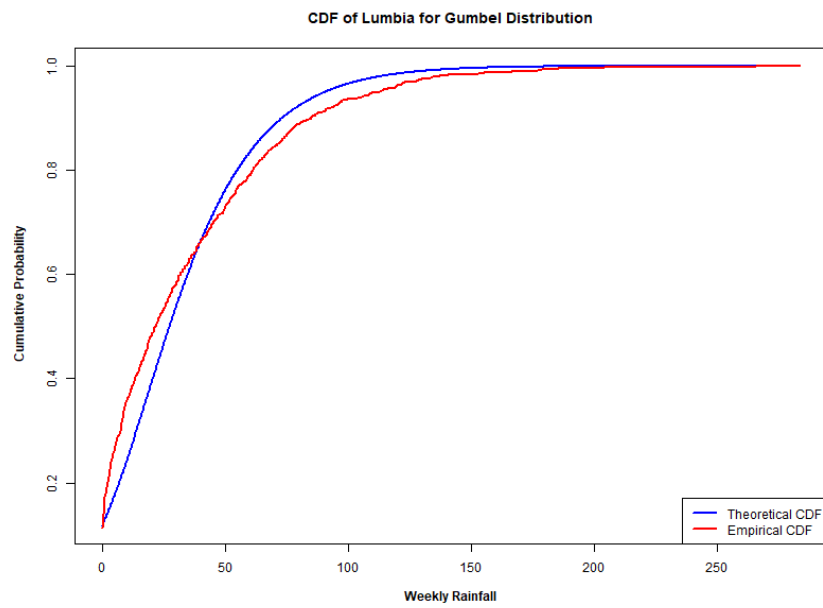


(b) General Santos

Figure B.14: CDF of Daily Rainfall for El Salvador, and General Santos

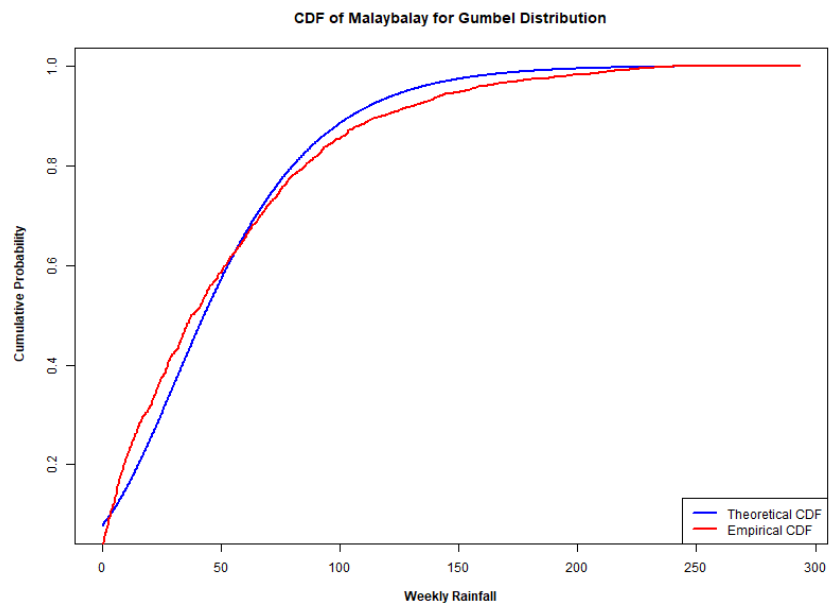


(a) Hinatuan

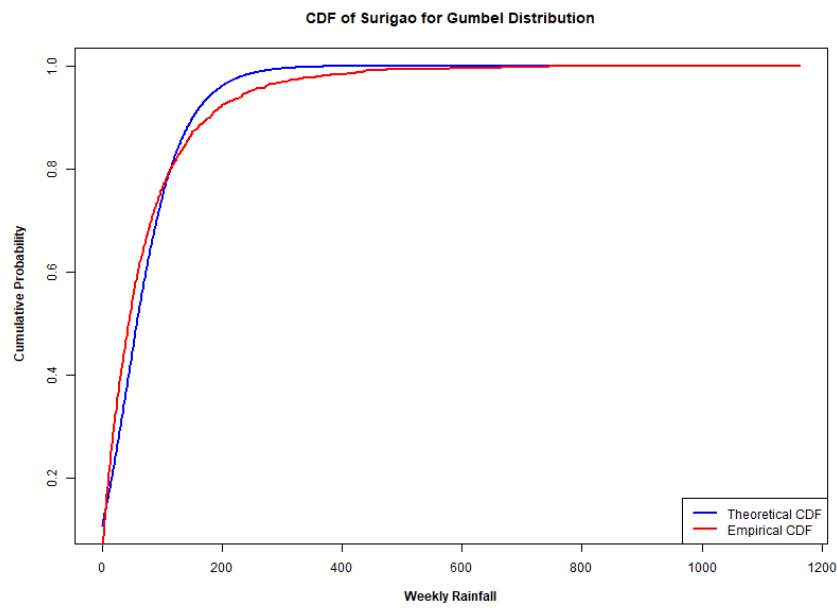


(b) Lumbia

Figure B.15: CDF of Daily Rainfall for Hinatuan, and Lumbia

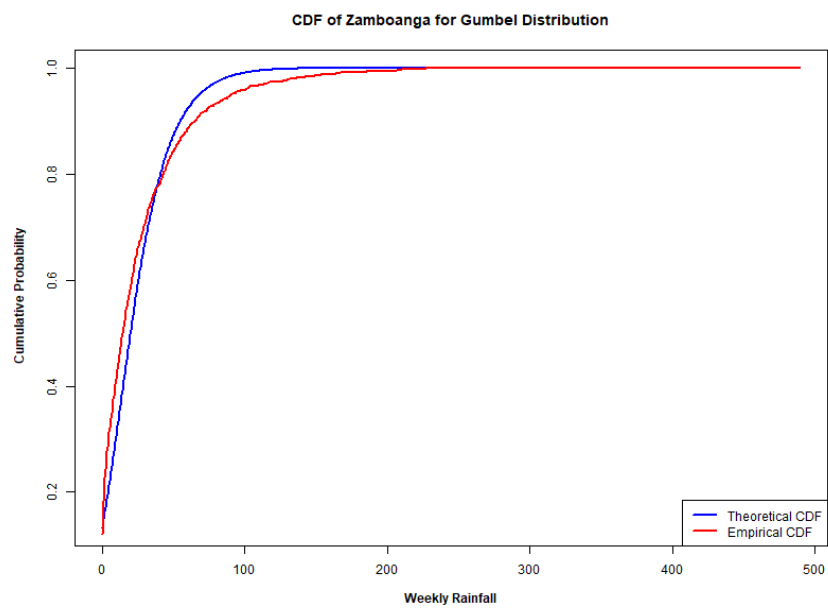


(a) Malaybalay



(b) Surigao

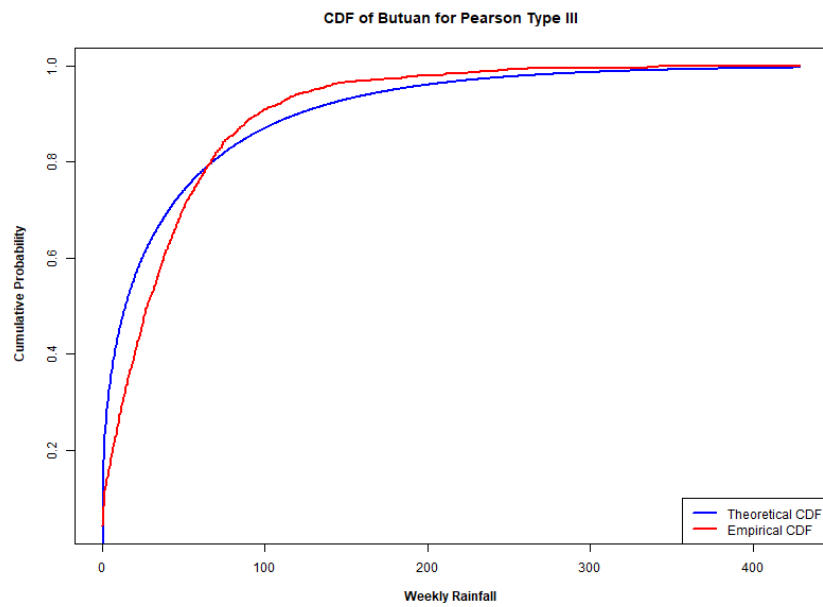
Figure B.16: CDF of Daily Rainfall for Malaybalay, and Surigao



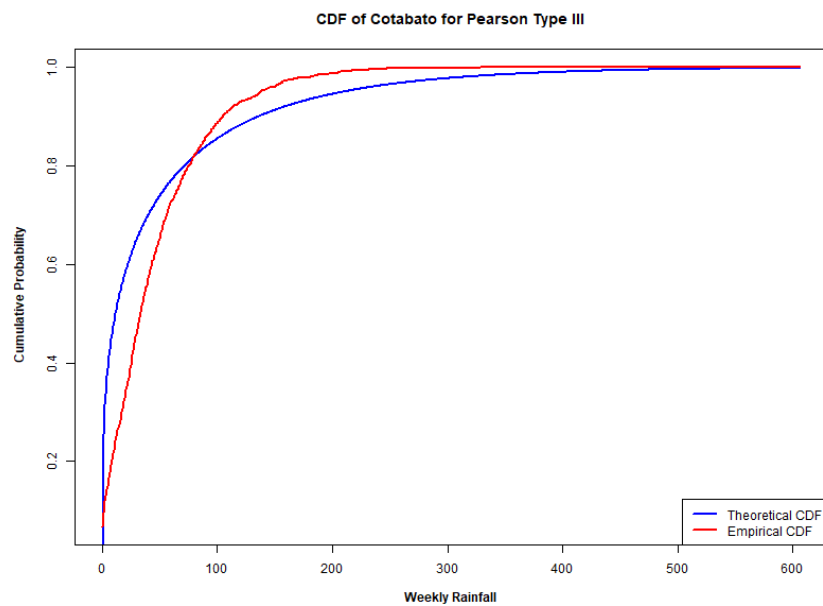
(a) Zamboanga

Figure B.17: CDF of Daily Rainfall for Zamboanga

B.1.4 Gamma Distribution

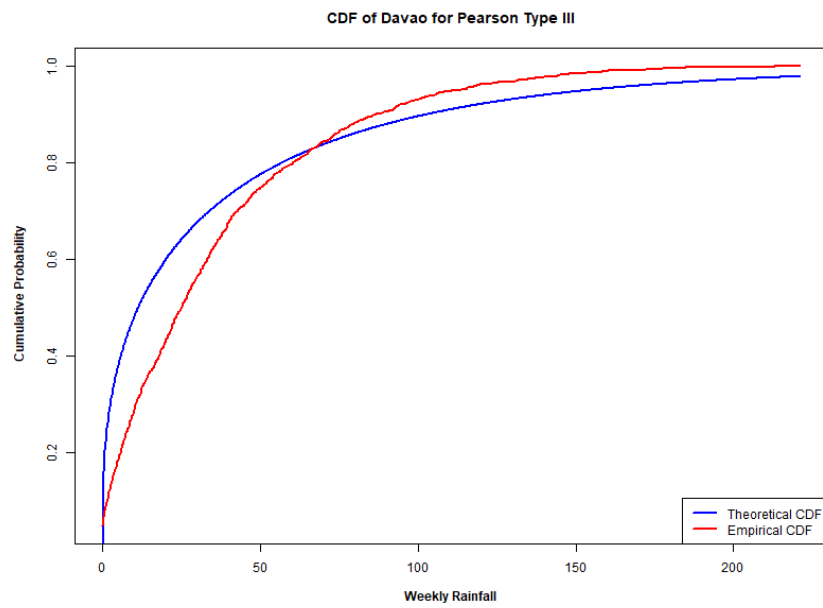


(a) Butuan

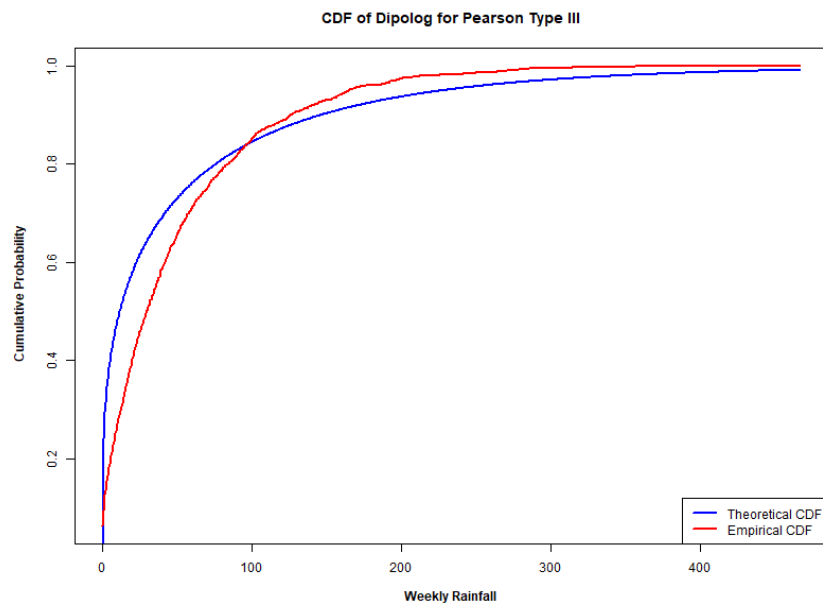


(b) Cotabato

Figure B.18: CDF of Daily Rainfall for Butuan, and Cotabato

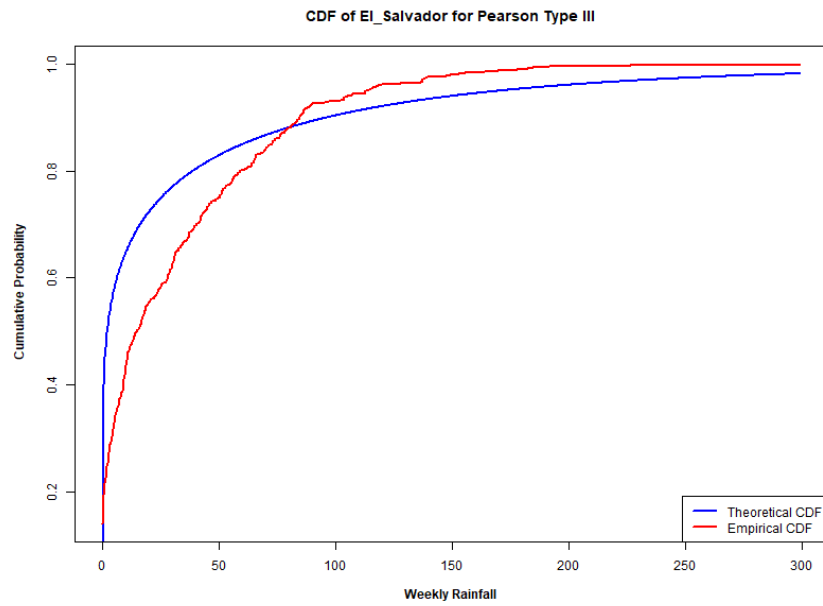


(a) Davao

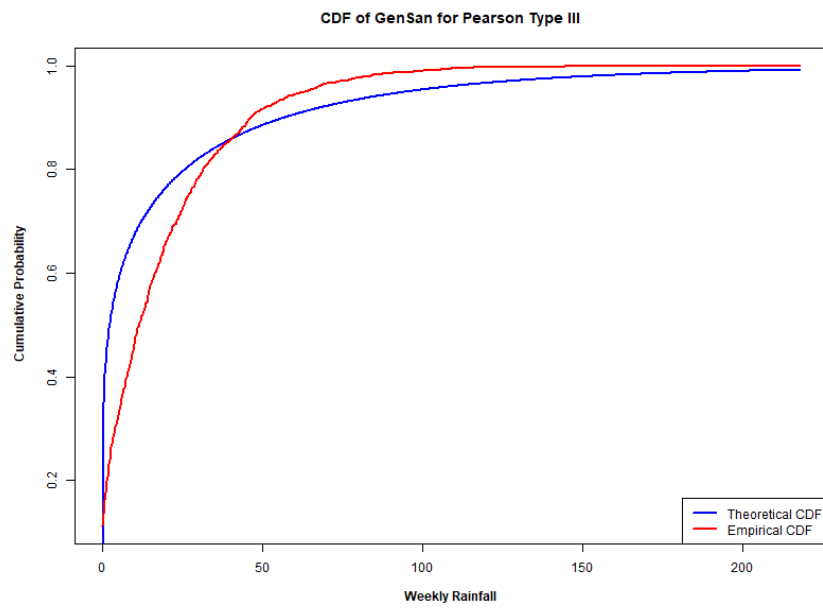


(b) Dipolog

Figure B.19: CDF of Daily Rainfall for Davao, and Dipolog

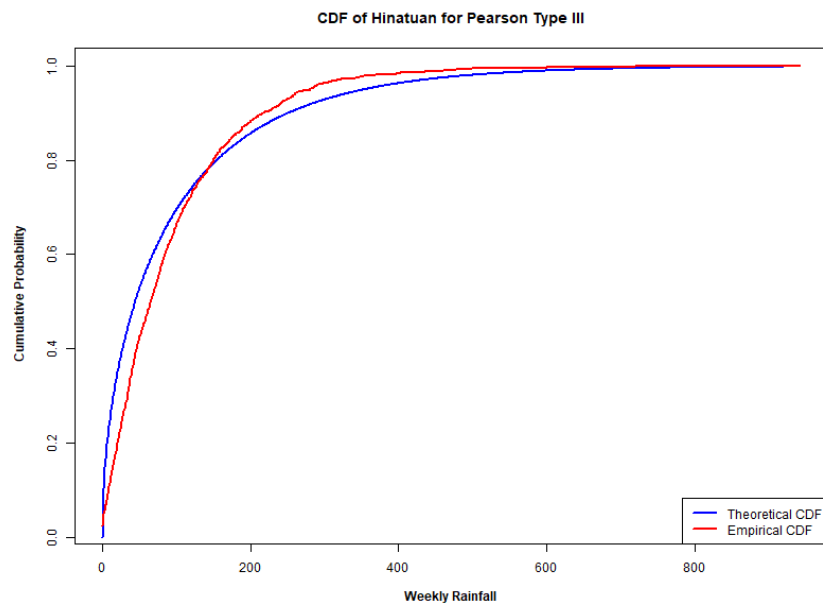


(a) El Salvador

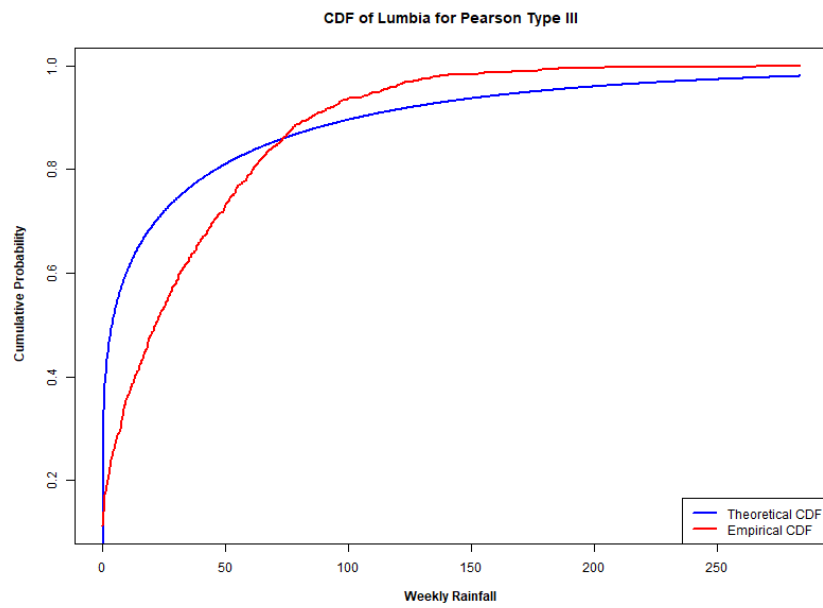


(b) General Santos

Figure B.20: CDF of Daily Rainfall for El Salvador, and General Santos

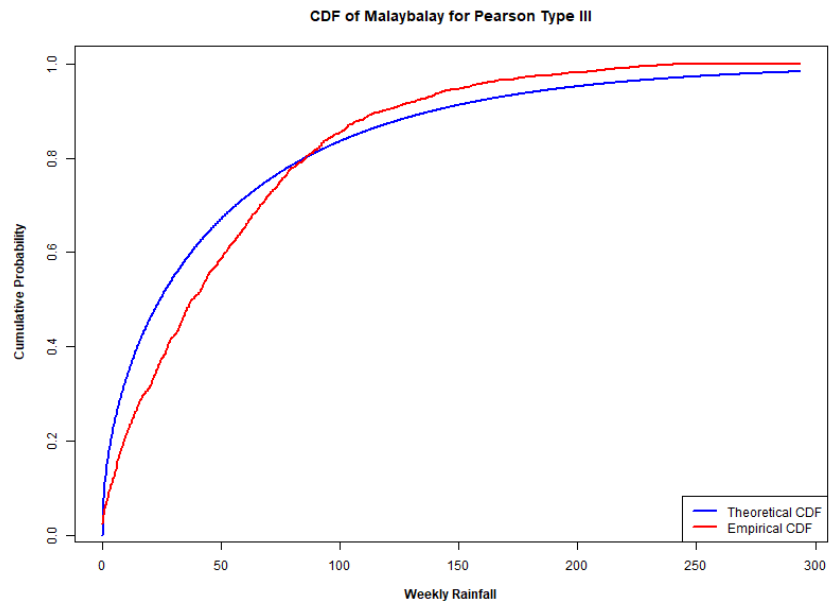


(a) Hinatuan

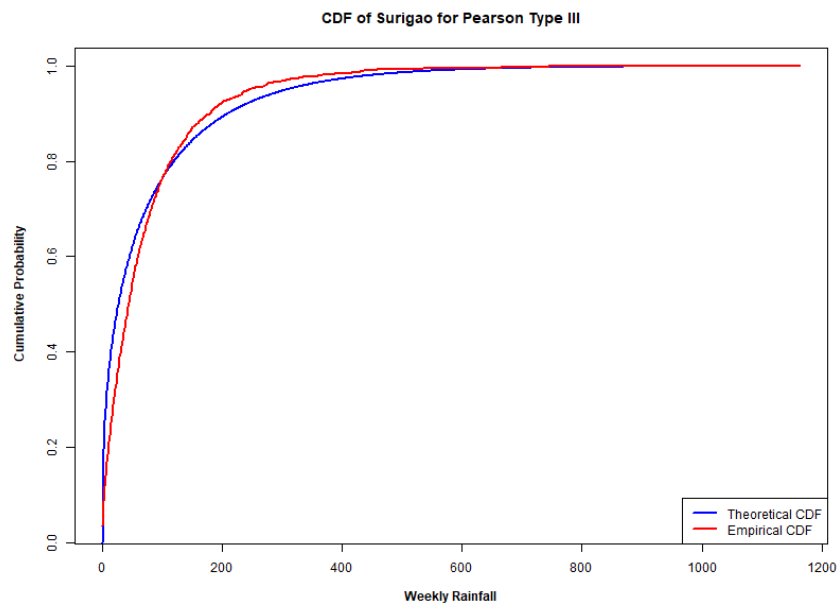


(b) Lumbia

Figure B.21: CDF of Daily Rainfall for Hinatuan, and Lumbia

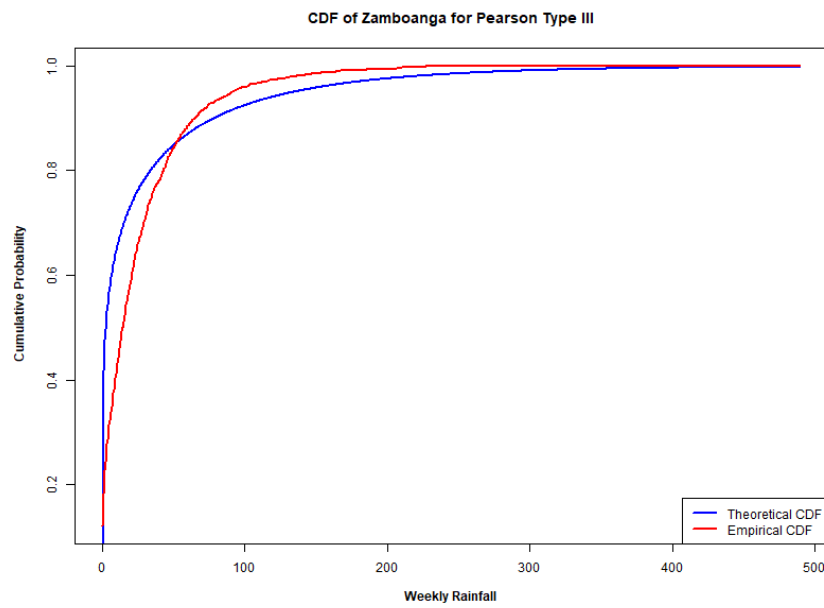


(a) Malaybalay



(b) Surigao

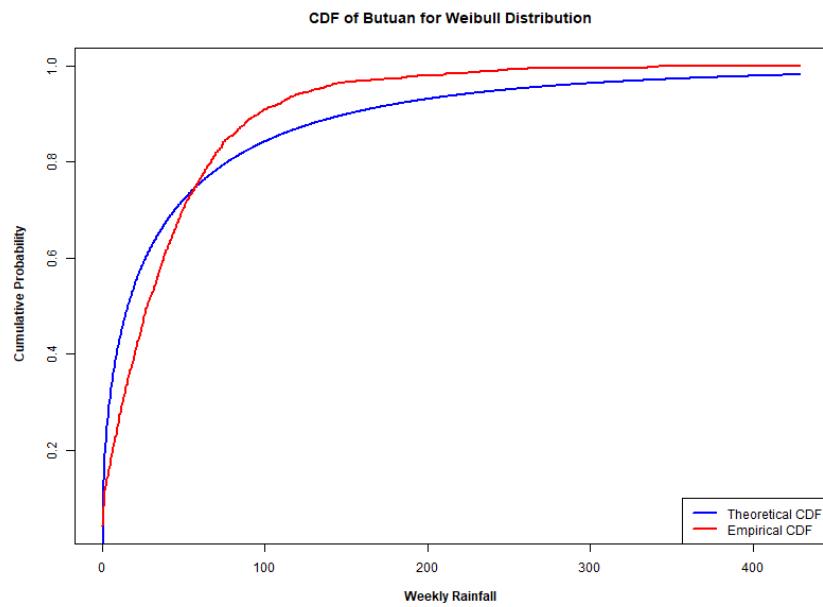
Figure B.22: CDF of Daily Rainfall for Malaybalay, and Surigao



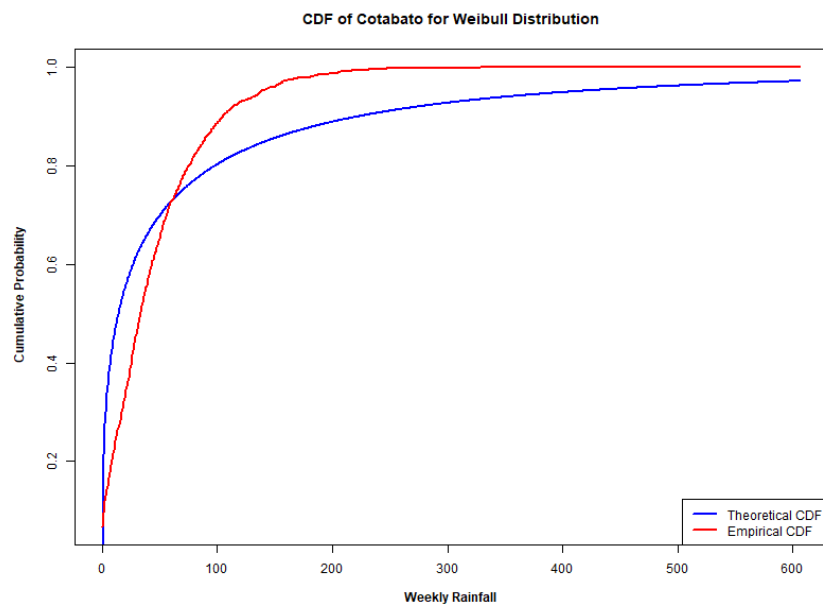
(a) Zamboanga

Figure B.23: CDF of Daily Rainfall for Zamboanga

B.1.5 Weibull Distribution

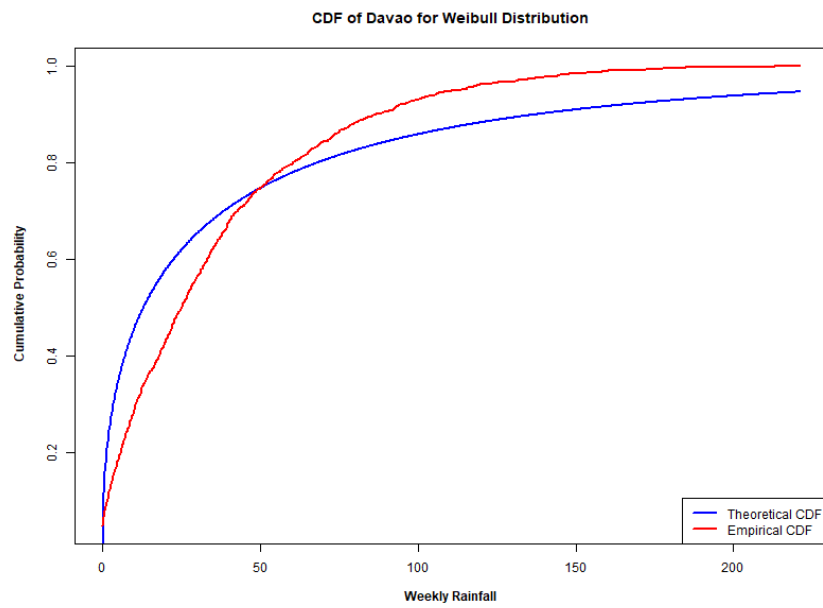


(a) Butuan

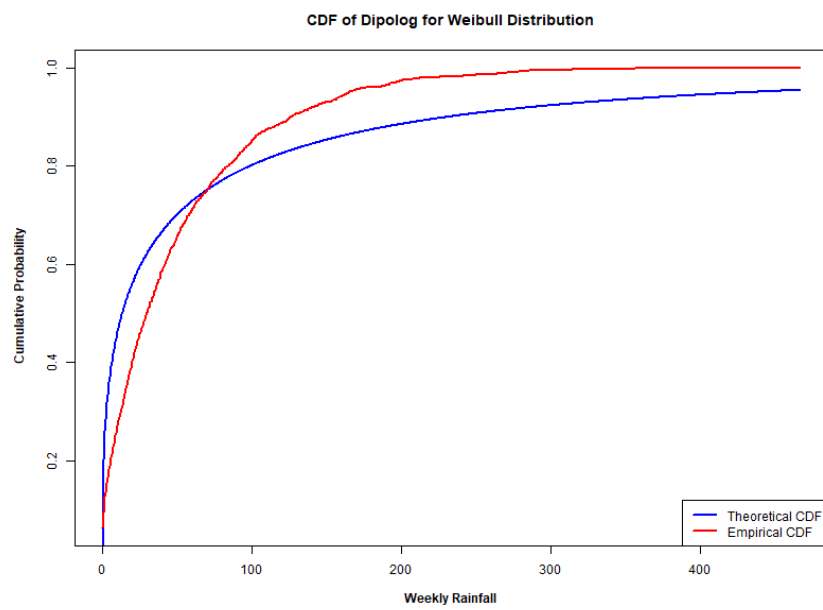


(b) Cotabato

Figure B.24: CDF of Daily Rainfall for Butuan, and Cotabato

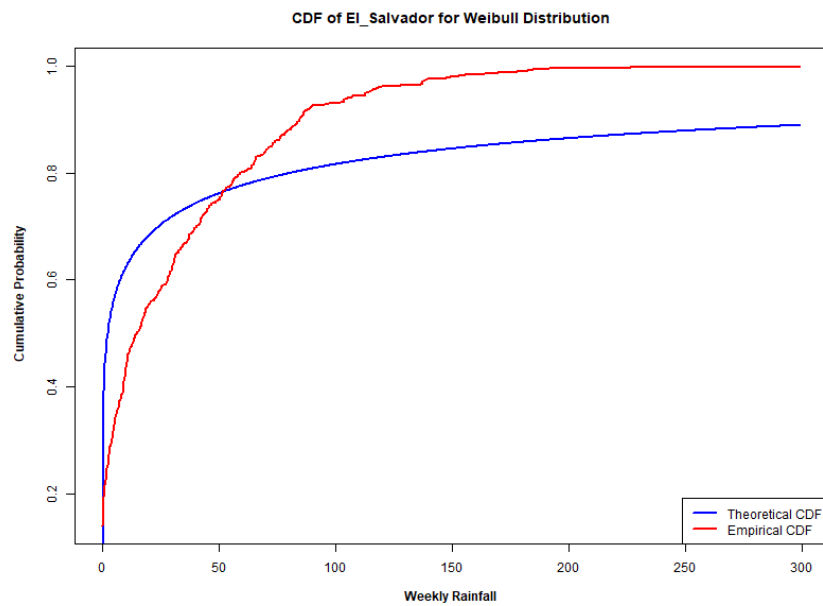


(a) Davao

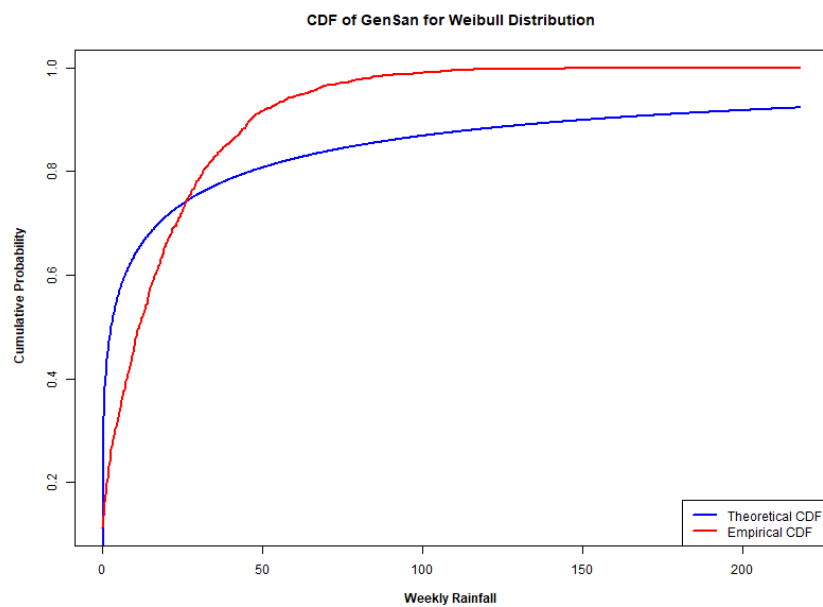


(b) Dipolog

Figure B.25: CDF of Daily Rainfall for Davao, and Dipolog

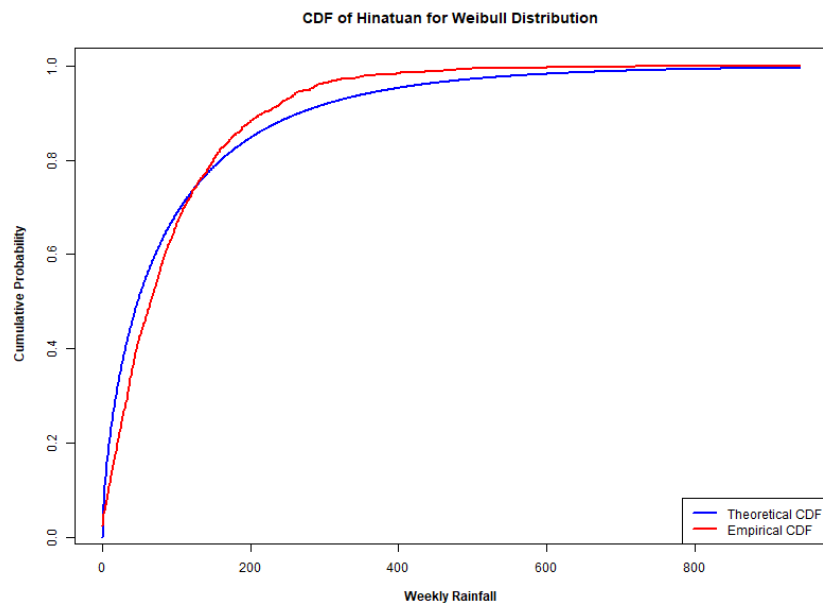


(a) El Salvador

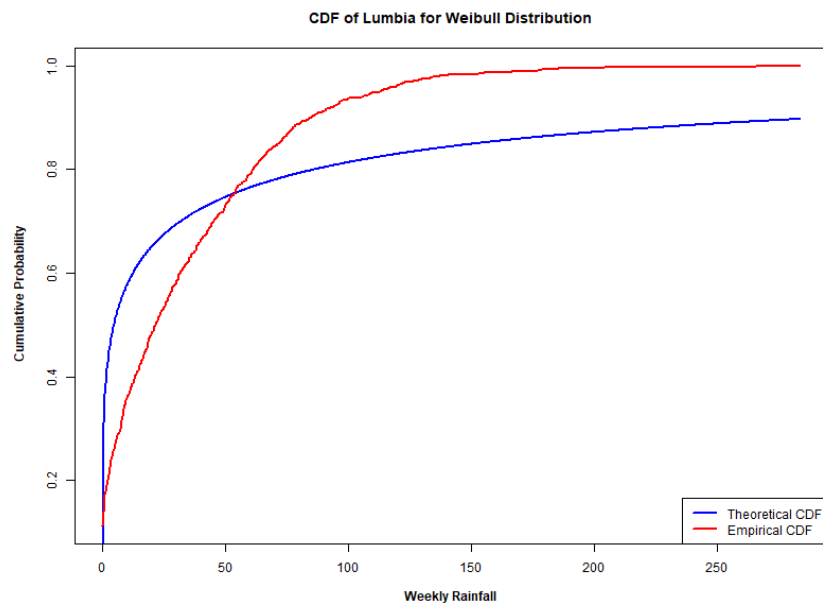


(b) General Santos

Figure B.26: CDF of Daily Rainfall for El Salvador, and General Santos

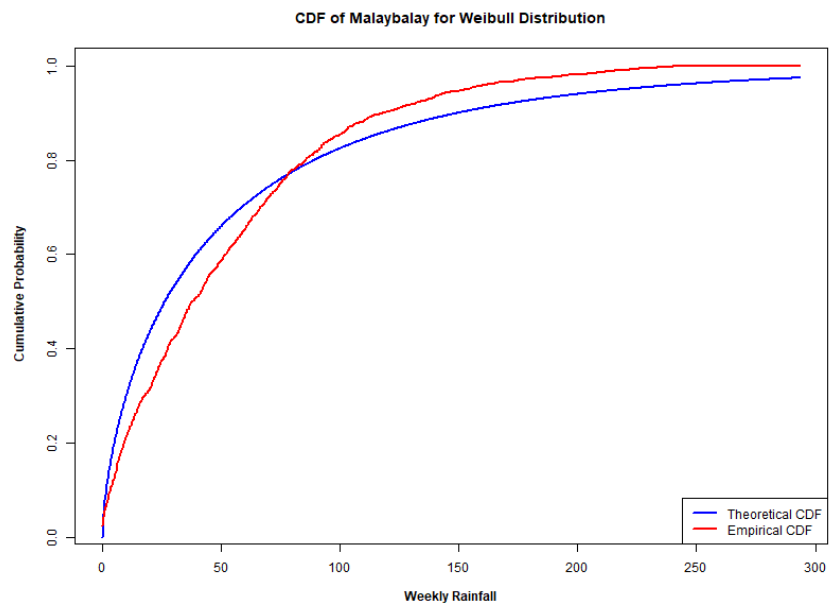


(a) Hinatuan

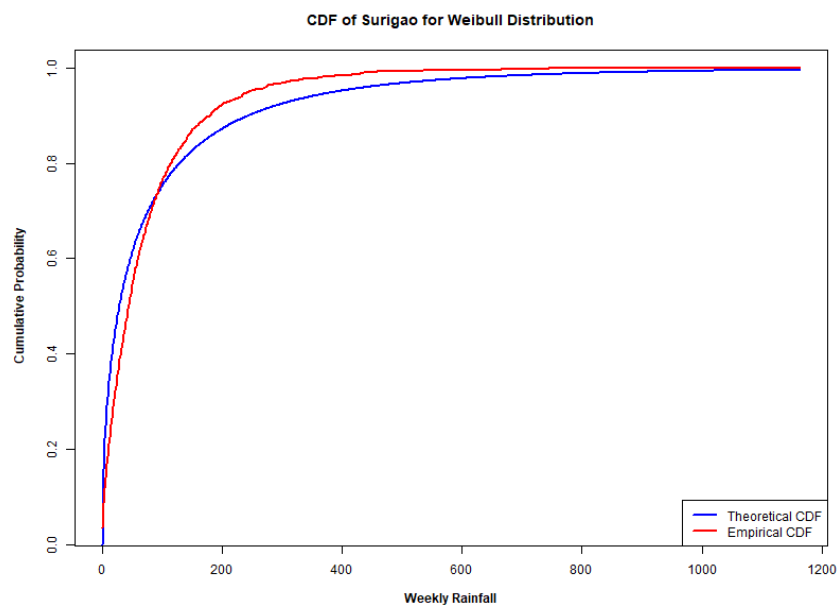


(b) Lumbia

Figure B.27: CDF of Daily Rainfall for Hinatuan, and Lumbia

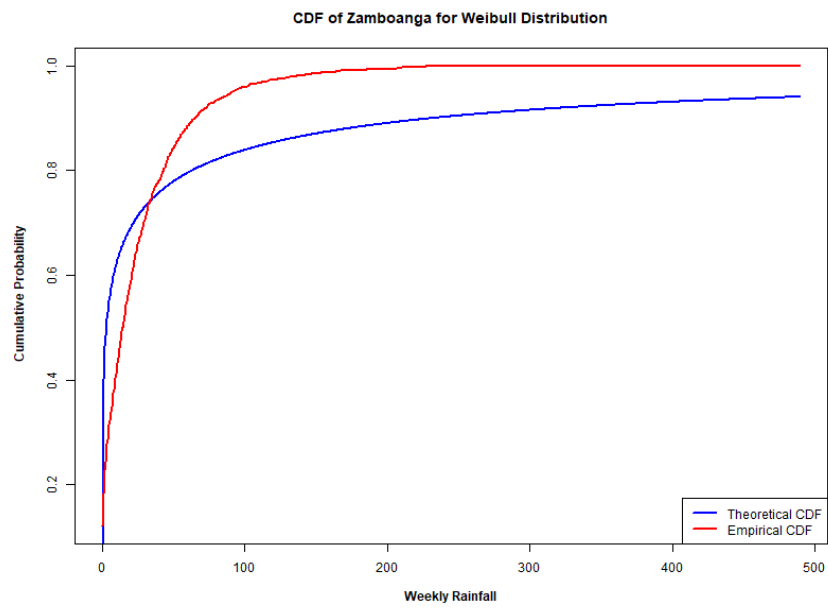


(a) Malaybalay



(b) Surigao

Figure B.28: CDF of Daily Rainfall for Malaybalay, and Surigao



(a) Zamboanga

Figure B.29: CDF of Daily Rainfall for Zamboanga

APPENDIX C

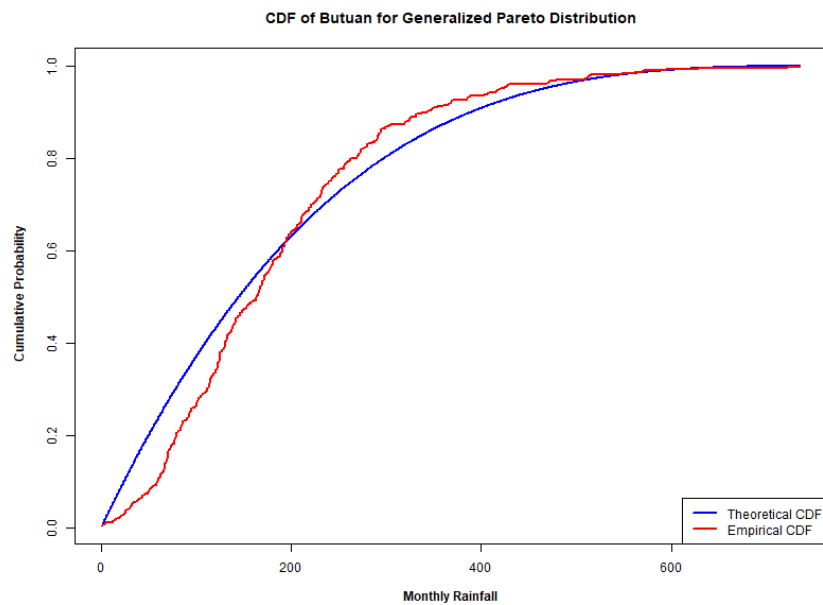
MONTHLY RAINFALL

This appendix presents the cumulative probability distributions for monthly rainfall, covering four additional probability distributions analyzed in the study. Chapter 4 Table 4.7 primarily examines three distributions: Generalized Pareto (GPD) for three stations, Generalized Extreme-Value (GEV) for eight stations, and Gumbel for one station. However, these additional distributions are included for those interested in further data exploration and comparison.

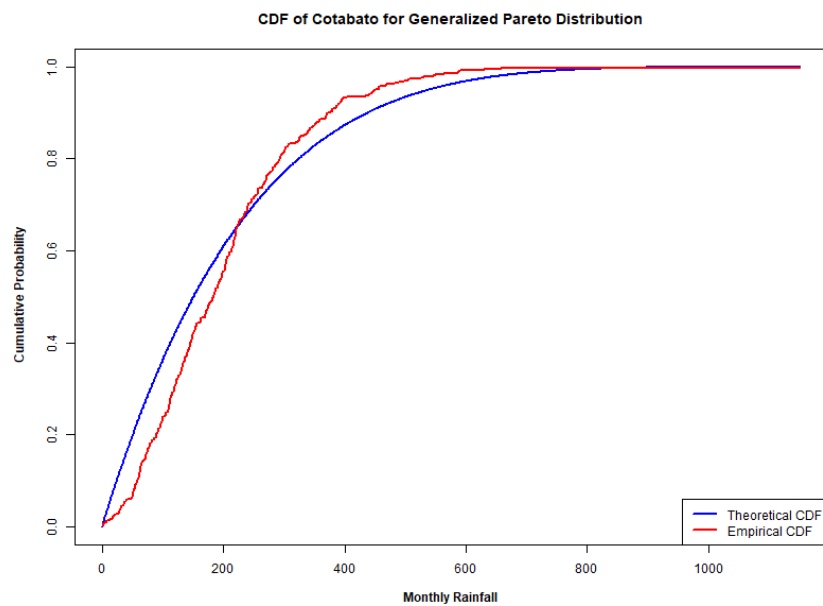
C.1 Cumulative Probability Distribution

Cumulative probability distribution of monthly rainfall for the five (5) probability distributions fitted in the study were presented in this section.

C.1.1 Generalized Pareto Distribution

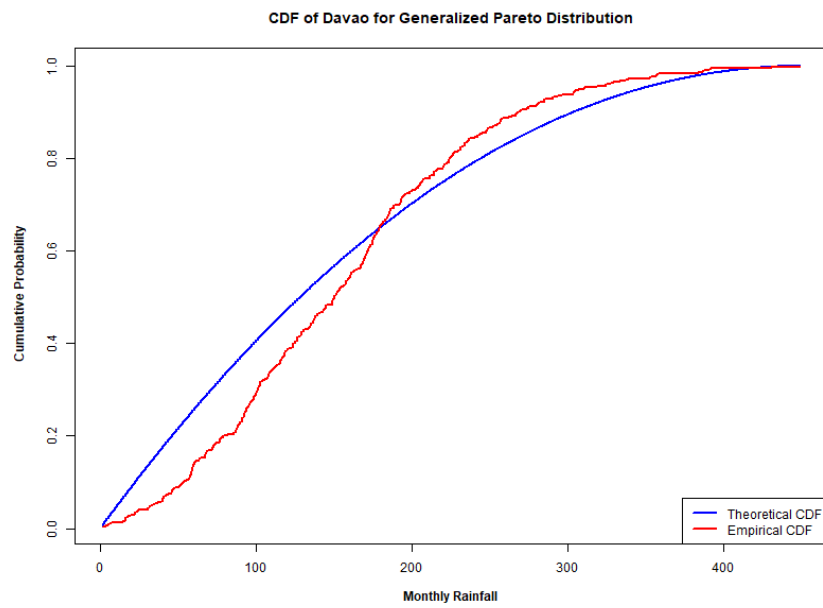


(a) Butuan

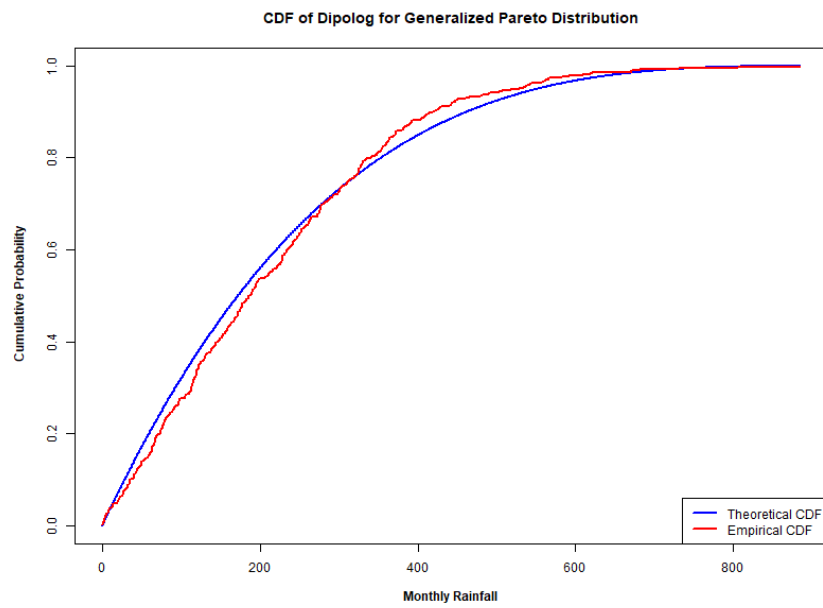


(b) Cotabato

Figure C.1: CDF of Daily Rainfall for Butuan, and Cotabato

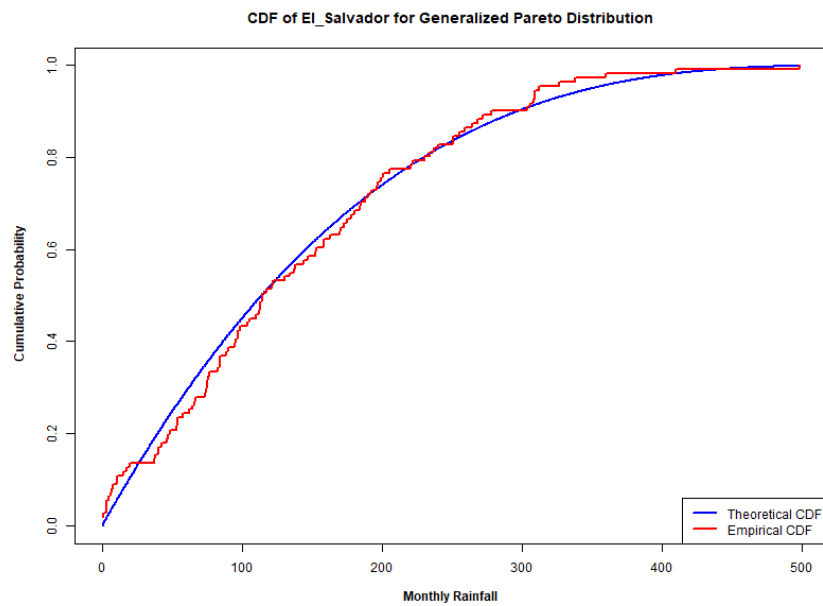


(a) Davao

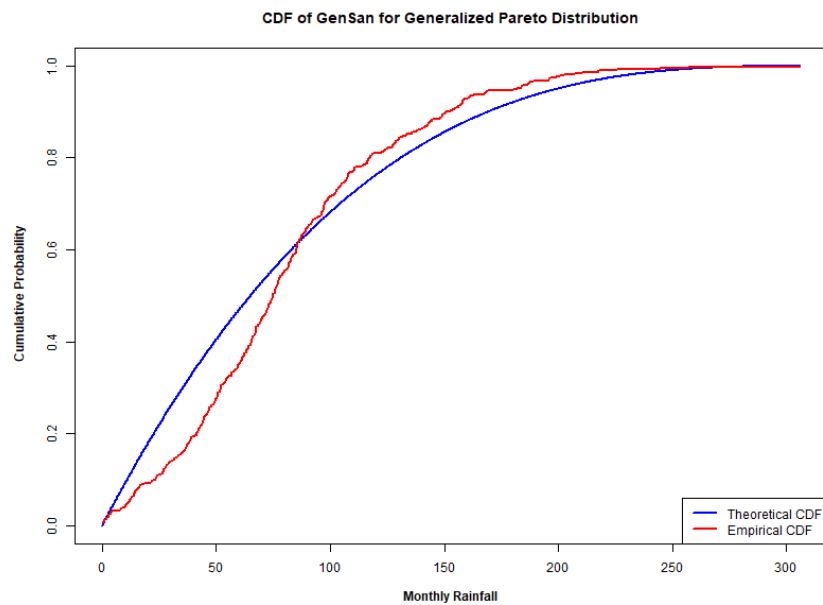


(b) Dipolog

Figure C.2: CDF of Daily Rainfall for Davao, and Dipolog

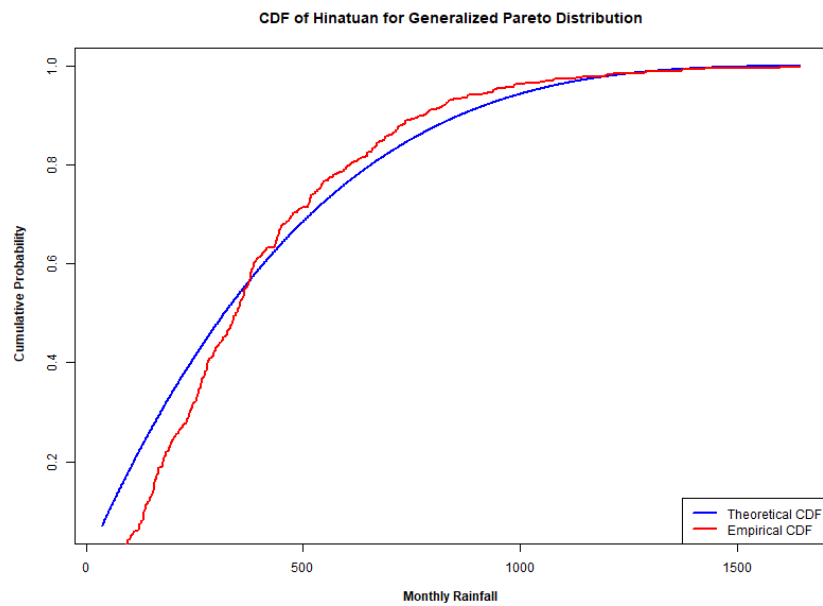


(a) El Salvador

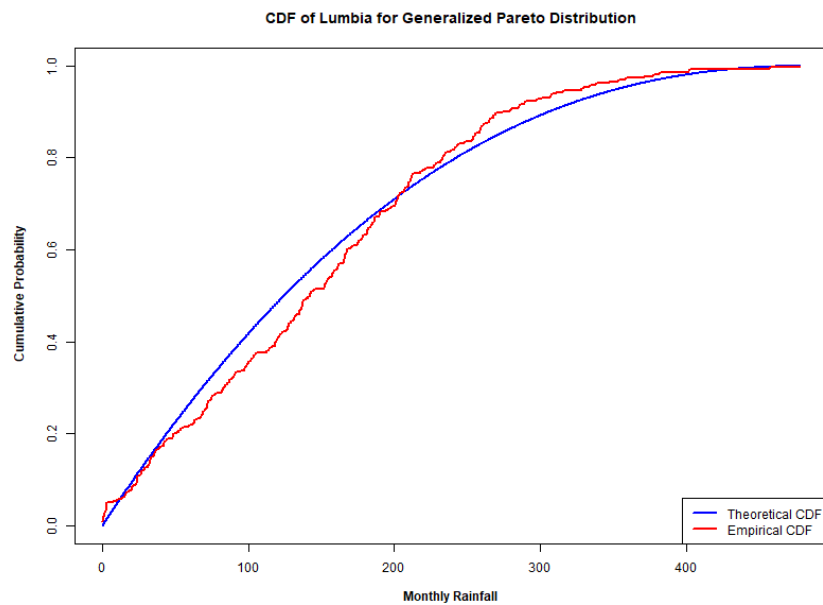


(b) General Santos

Figure C.3: CDF of Daily Rainfall for El Salvador, and General Santos

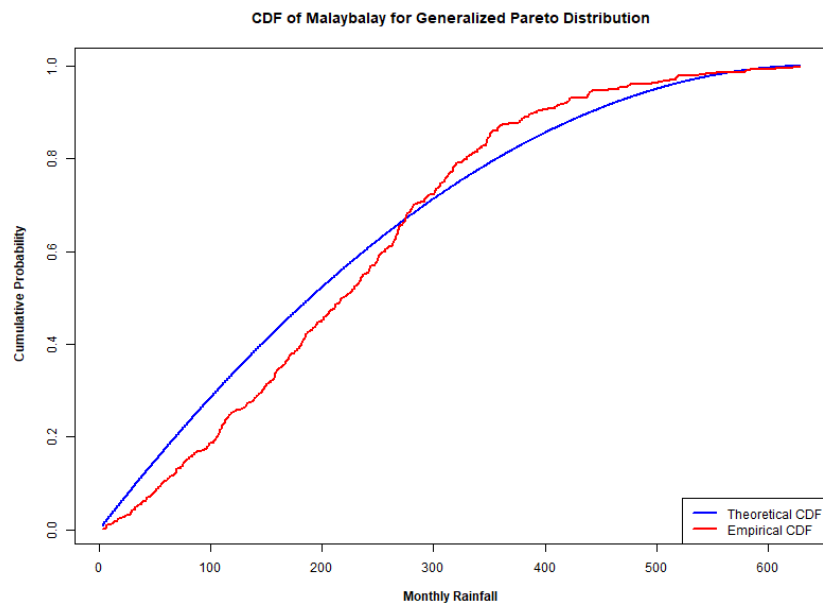


(a) Hinatuan

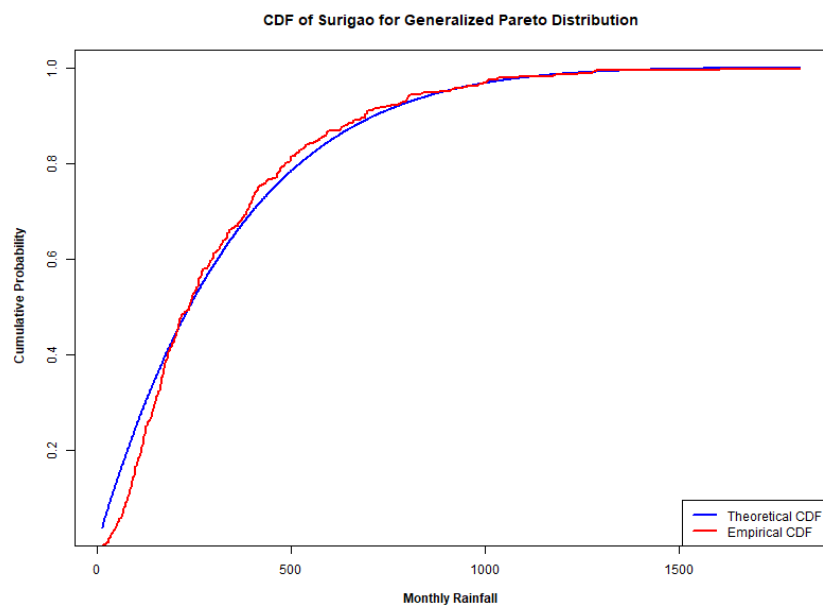


(b) Lumbia

Figure C.4: CDF of Daily Rainfall for Hinatuan, and Lumbia

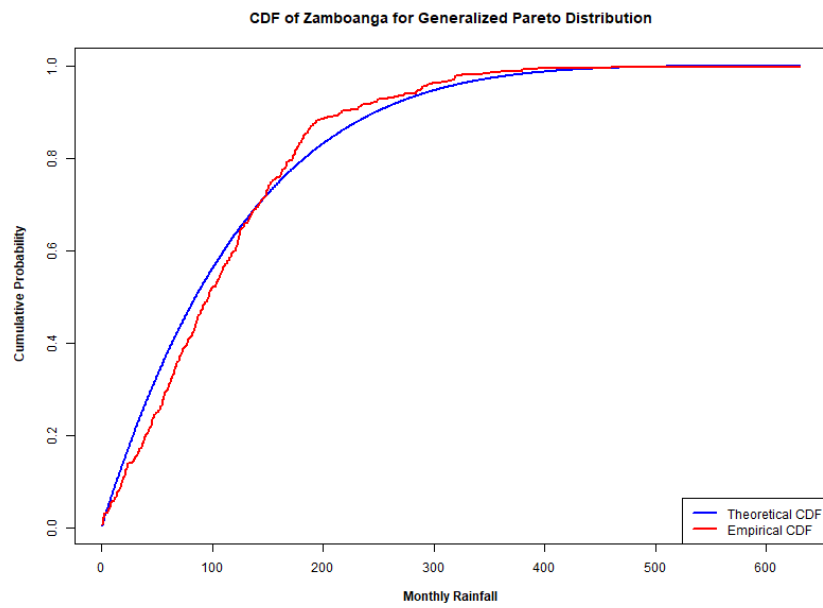


(a) Malaybalay



(b) Surigao

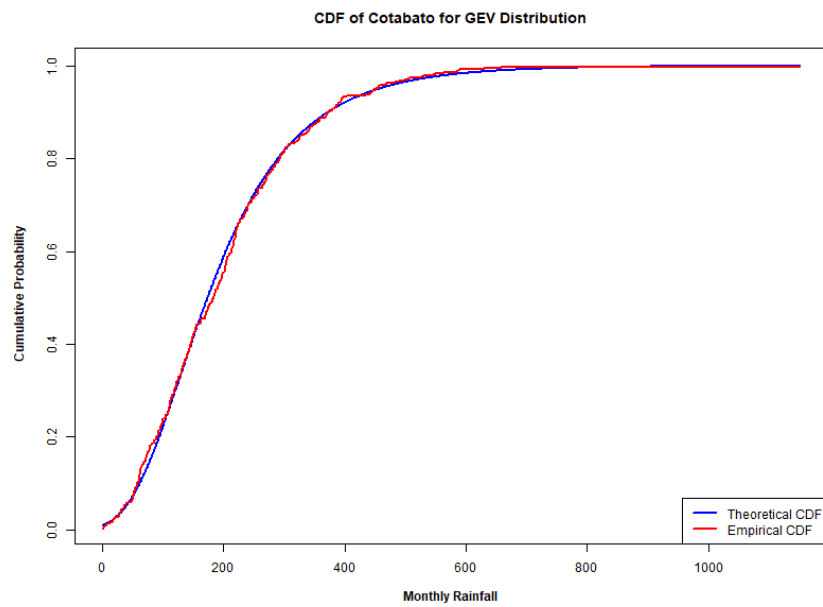
Figure C.5: CDF of Daily Rainfall for Malaybalay, and Surigao



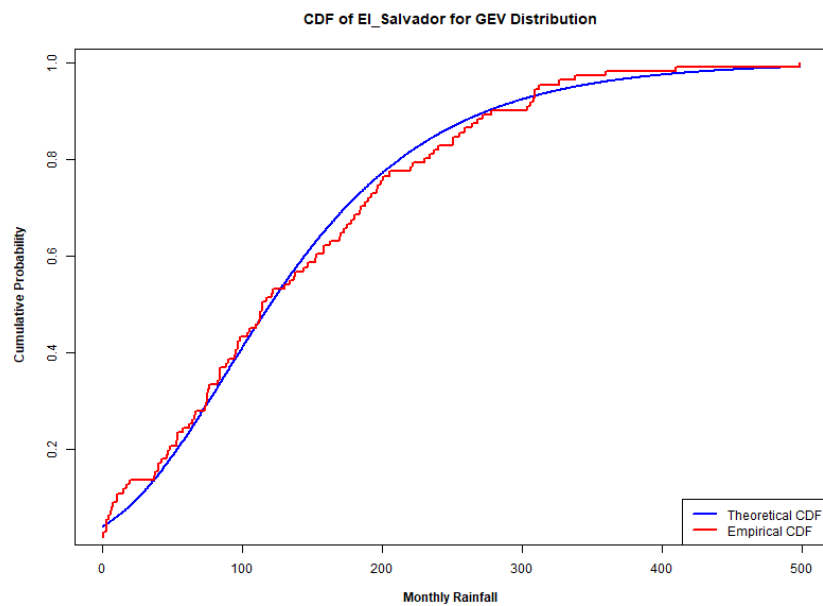
(a) Zamboanga

Figure C.6: CDF of Daily Rainfall for Zamboanga

C.1.2 Generalize Extreme-Value Distribution

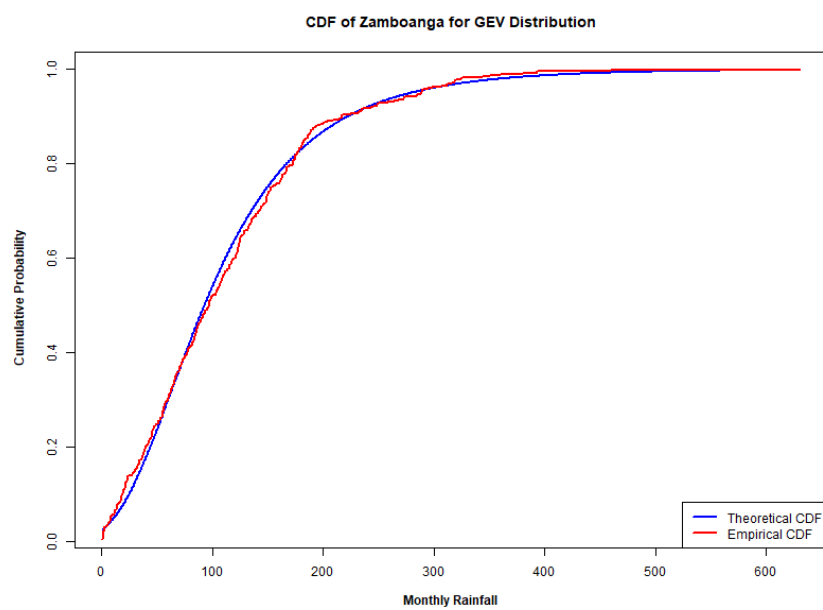


(a) Cotabato



(b) El Salvador

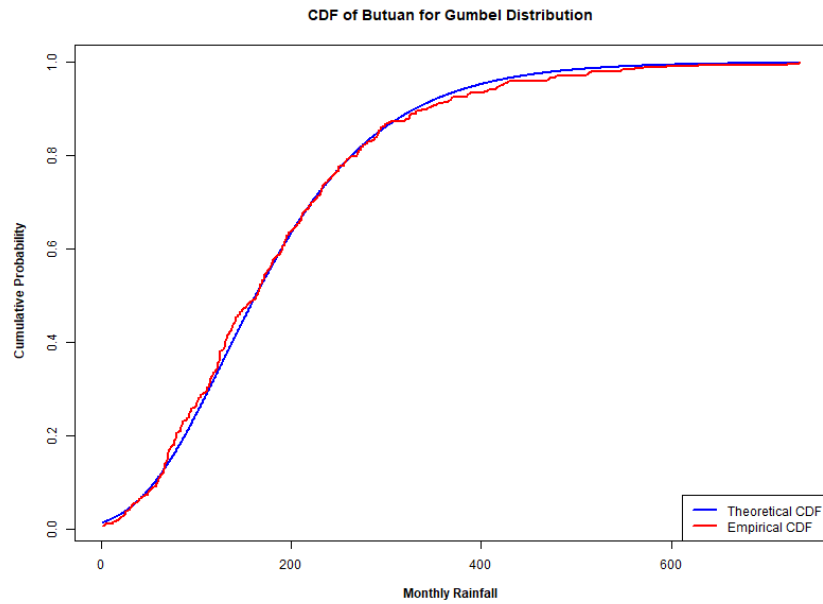
Figure C.7: CDF of Daily Rainfall for Cotabato, and El Salvador



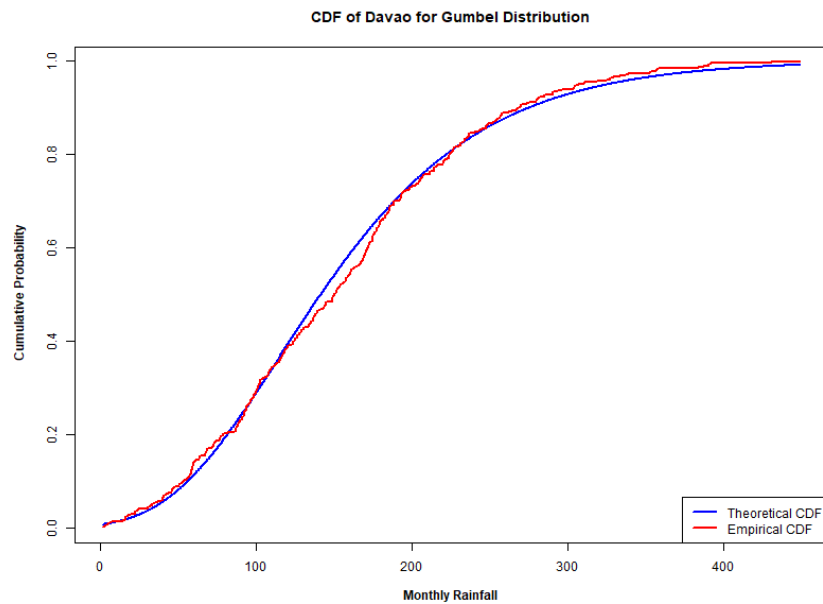
(a) Zamboanga

Figure C.8: CDF of Daily Rainfall for Zamboanga

C.1.3 Gumbel Distribution

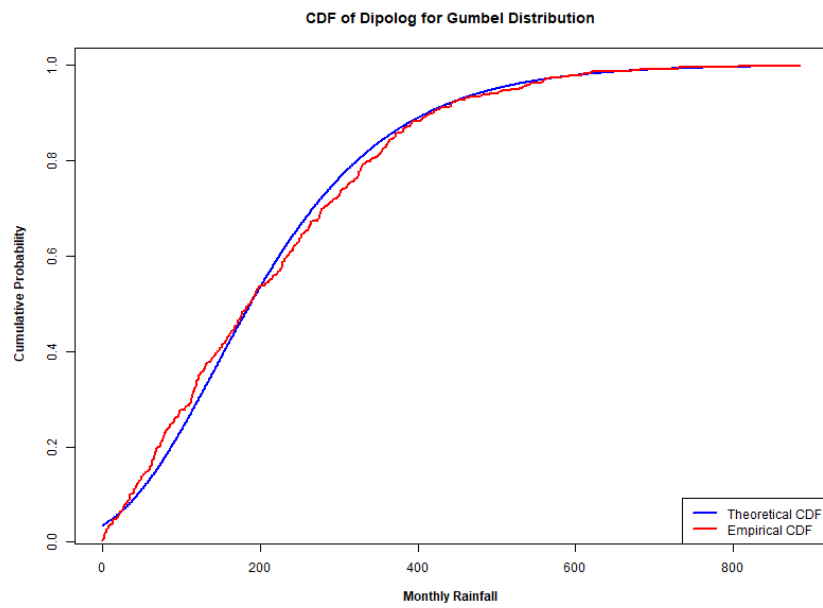


(a) Butuan

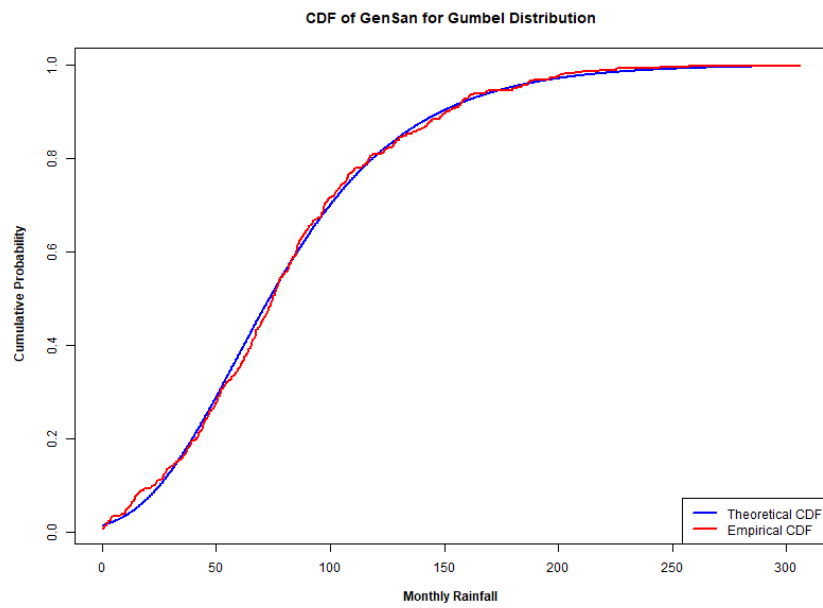


(b) Davao

Figure C.9: CDF of Daily Rainfall for Butuan, and Davao

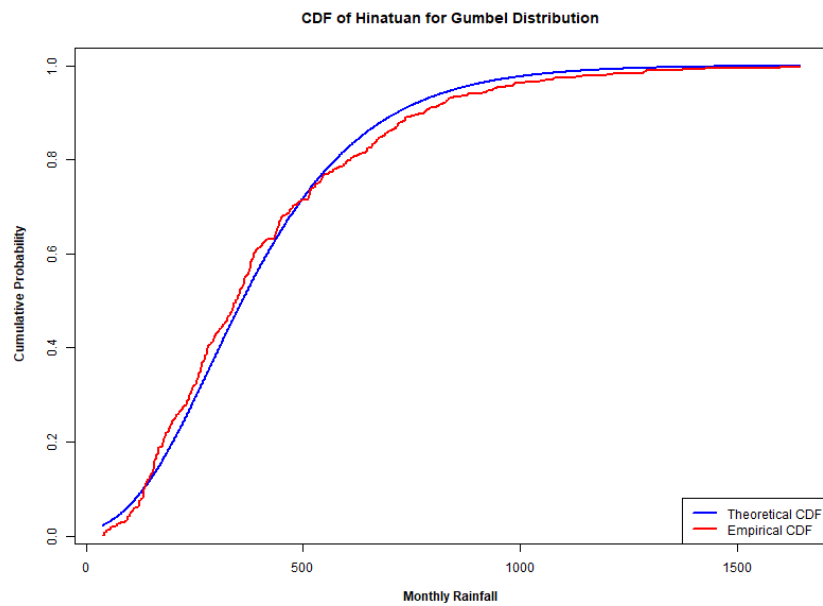


(a) Dipolog

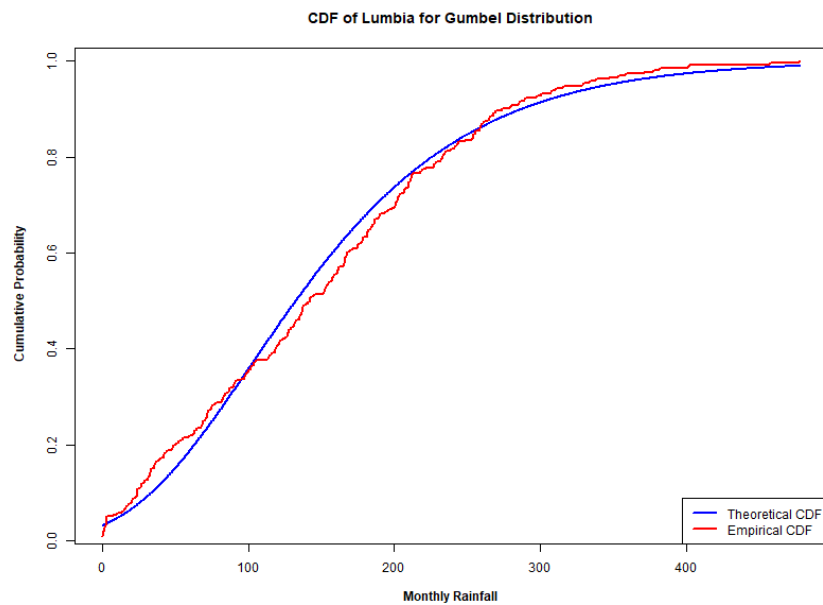


(b) General Santos

Figure C.10: CDF of Daily Rainfall for Dipolog, and General Santos

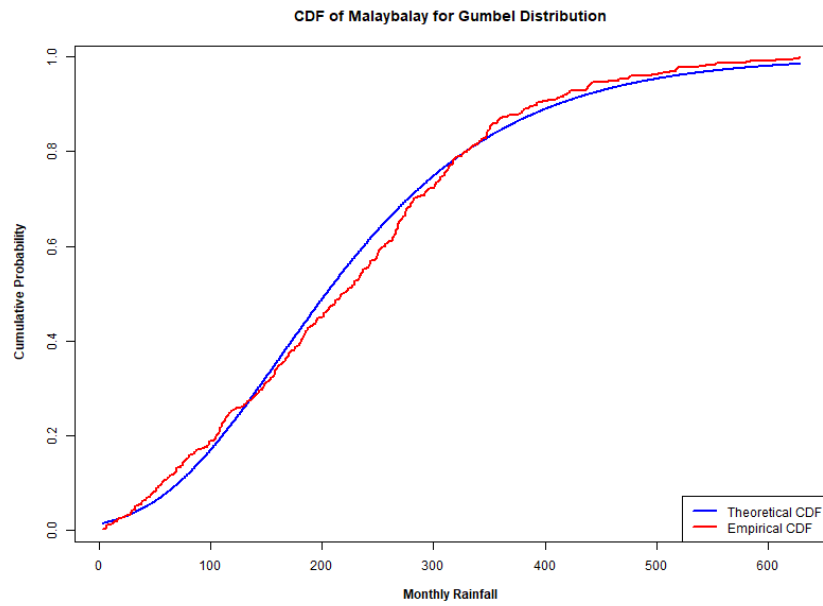


(a) Hinatuan

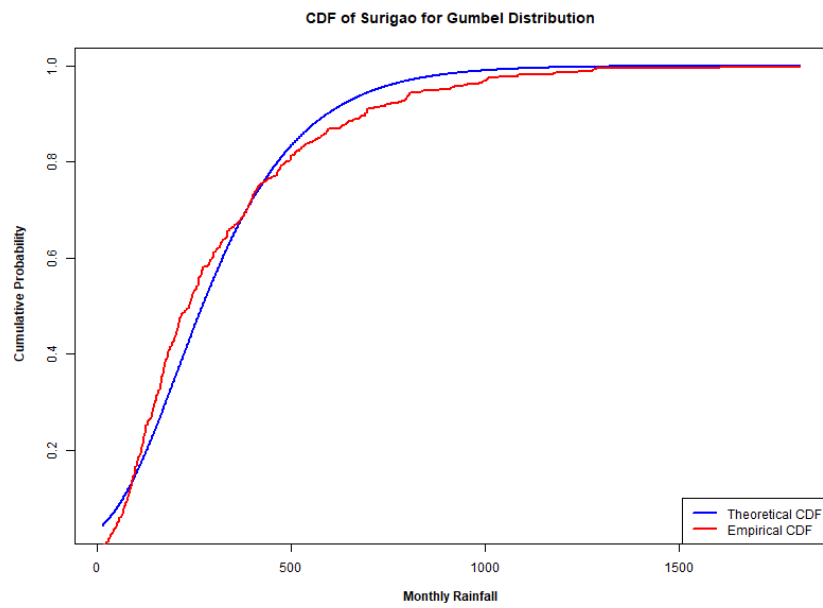


(b) Lumbia

Figure C.11: CDF of Daily Rainfall for Hinatuan, and Lumbia



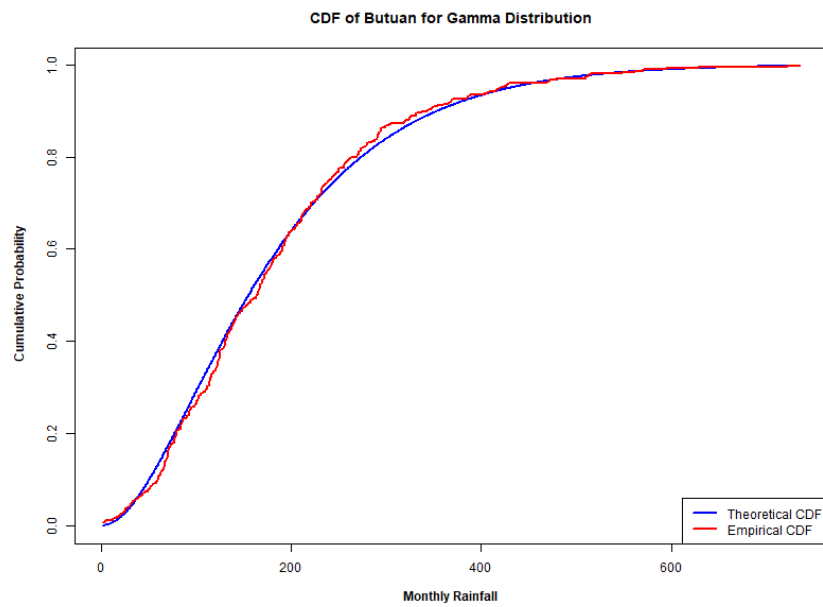
(a) Malaybalay



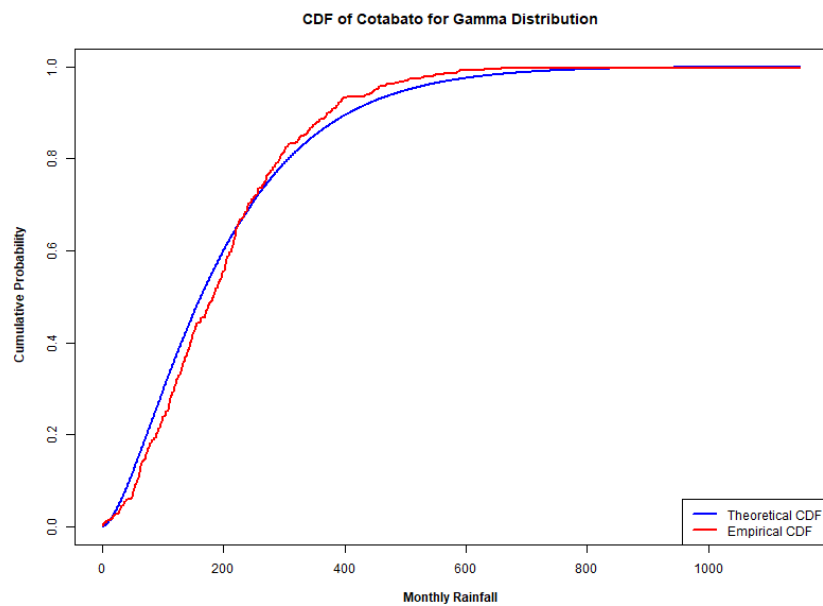
(b) Surigao

Figure C.12: CDF of Daily Rainfall for Malaybalay, and Surigao

C.1.4 Gamma Distribution

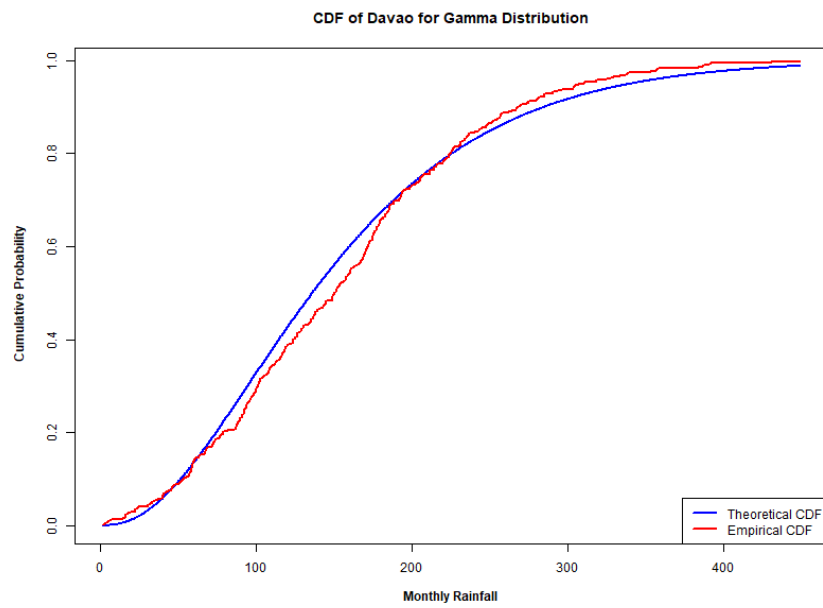


(a) Butuan

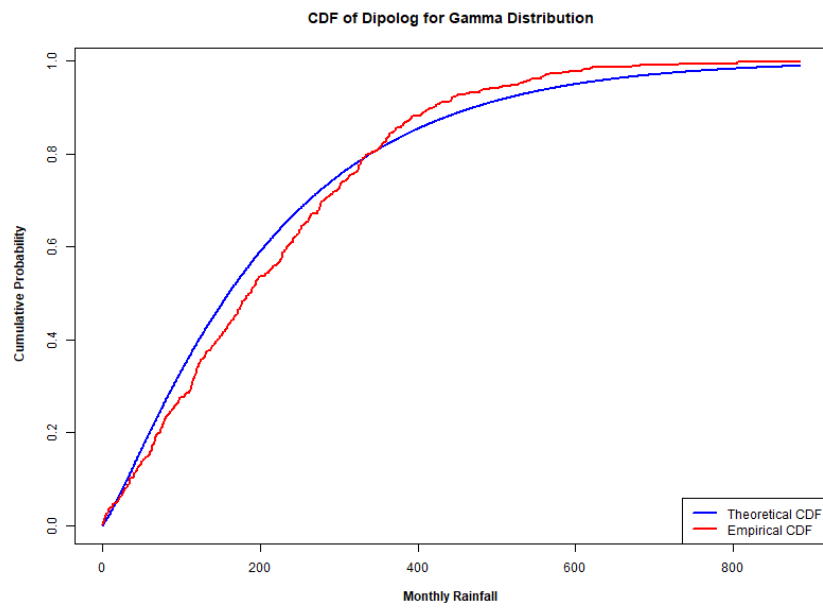


(b) Cotabato

Figure C.13: CDF of Daily Rainfall for Butuan, and Cotabato

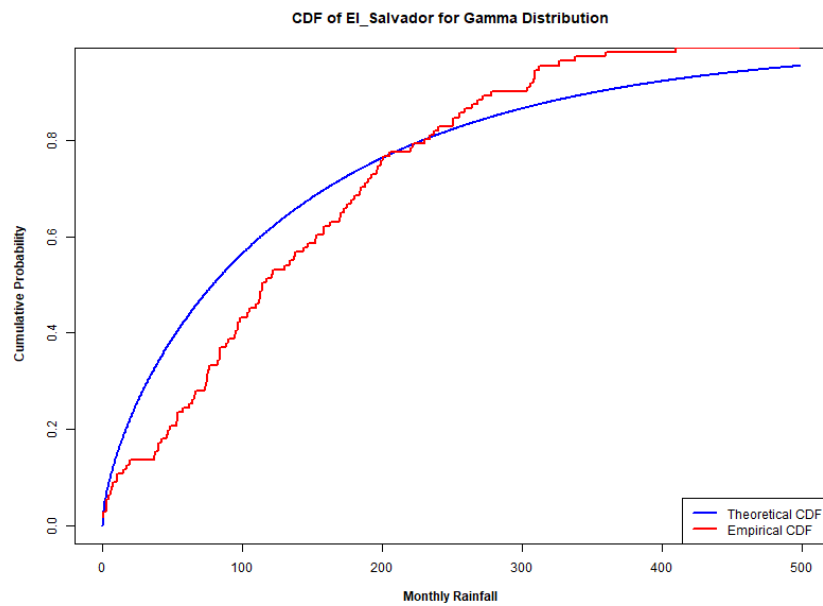


(a) Davao

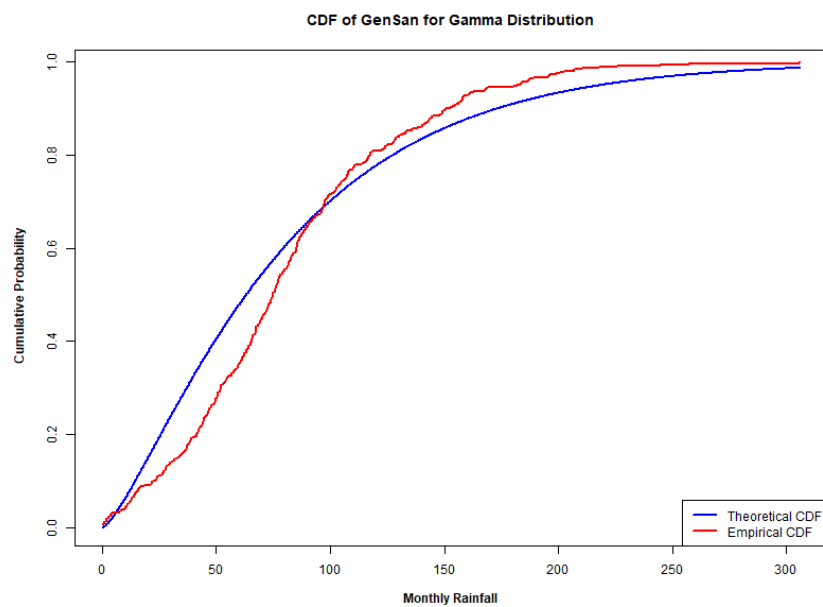


(b) Dipolog

Figure C.14: CDF of Daily Rainfall for Davao, and Dipolog

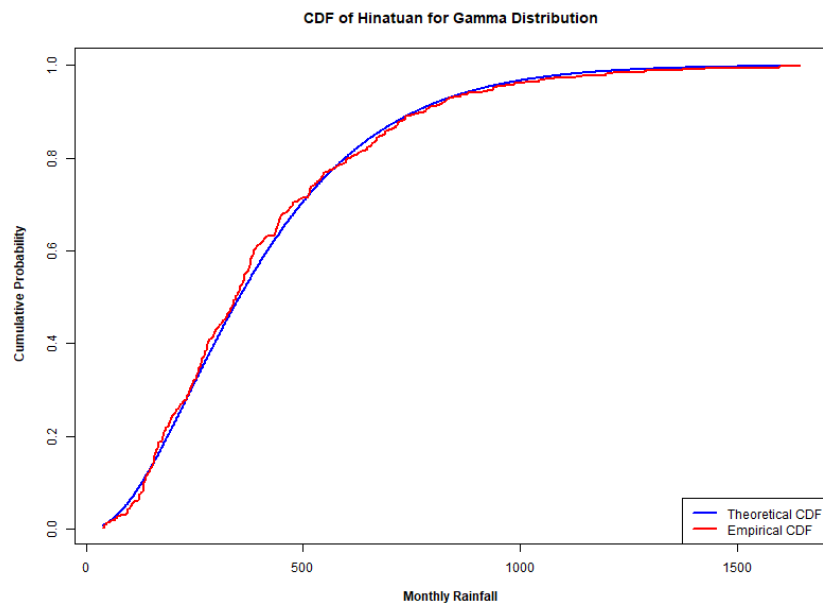


(a) El Salvador

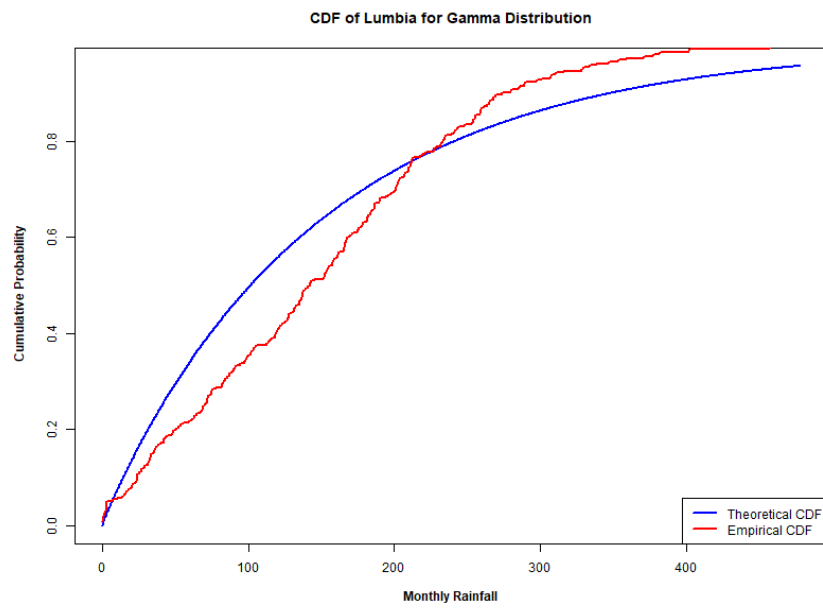


(b) General Santos

Figure C.15: CDF of Daily Rainfall for El Salvador, and General Santos

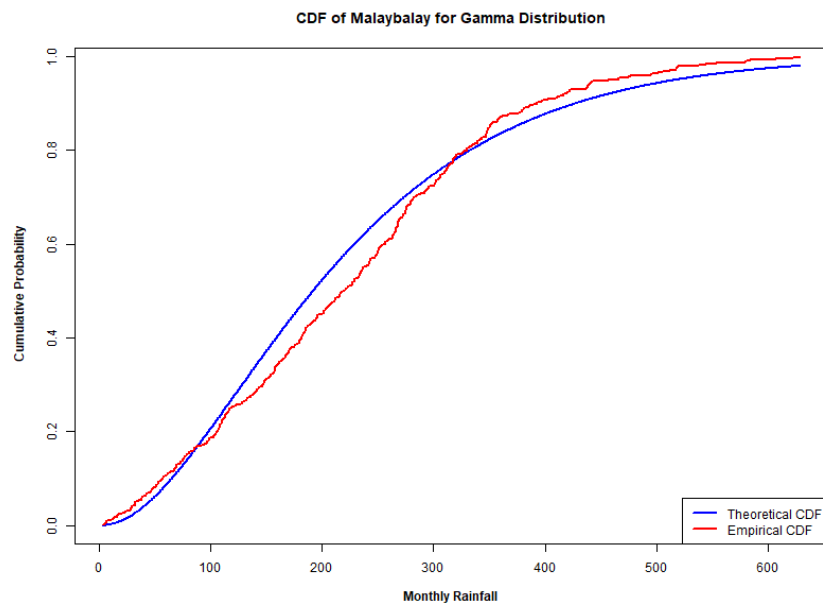


(a) Hinatuan

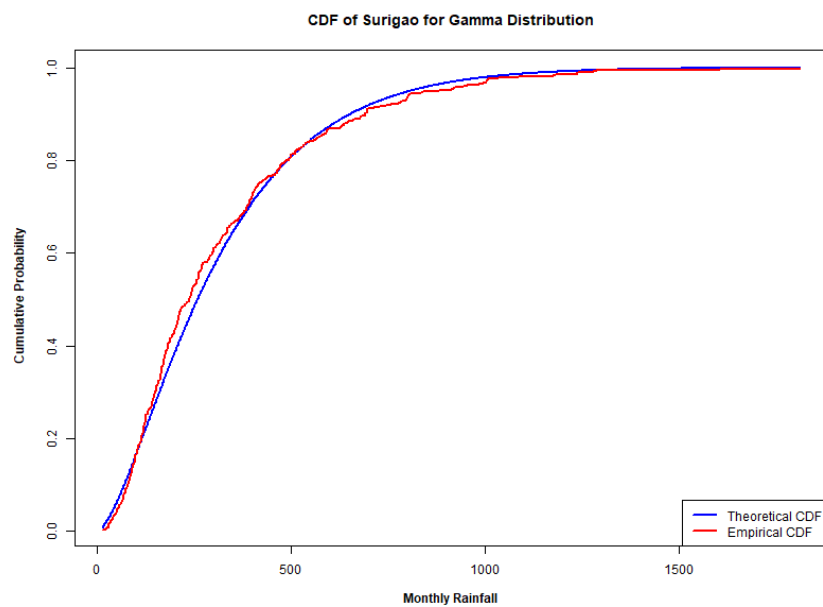


(b) Lumbia

Figure C.16: CDF of Daily Rainfall for Hinatuan, and Lumbia

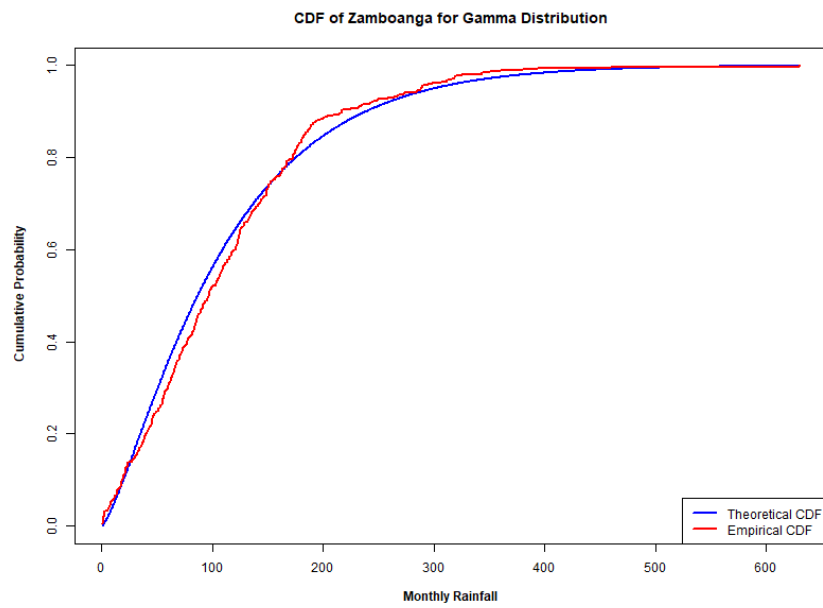


(a) Malaybalay



(b) Surigao

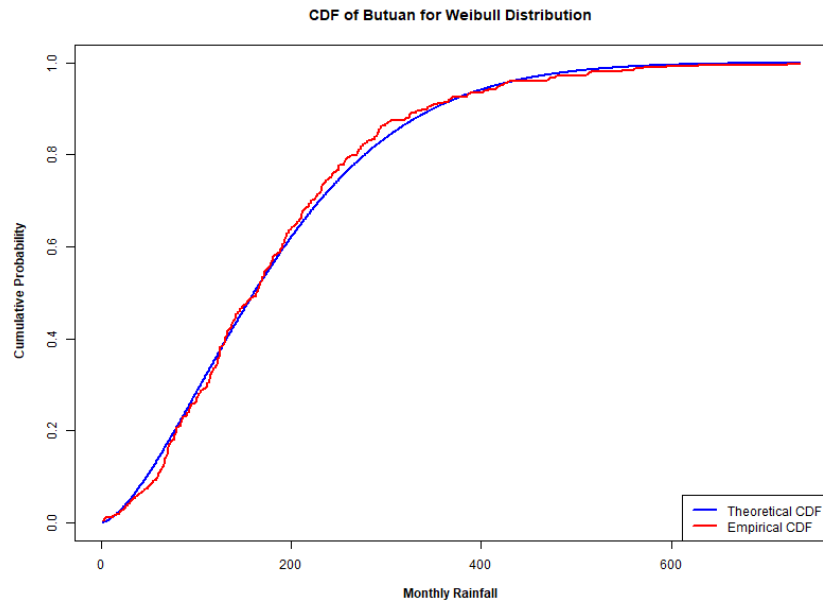
Figure C.17: CDF of Daily Rainfall for Malaybalay, and Surigao



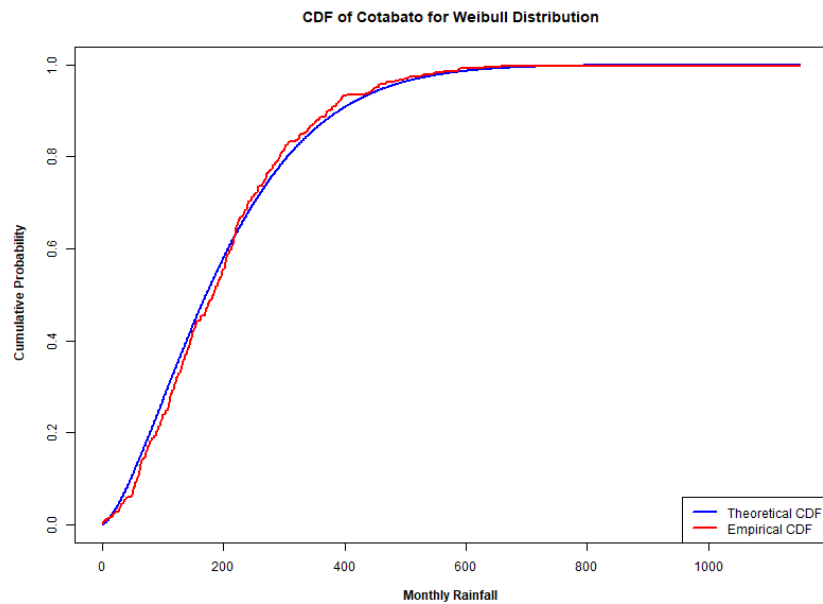
(a) Zamboanga

Figure C.18: CDF of Monthly Rainfall for Zamboanga

C.1.5 Weibull Distribution

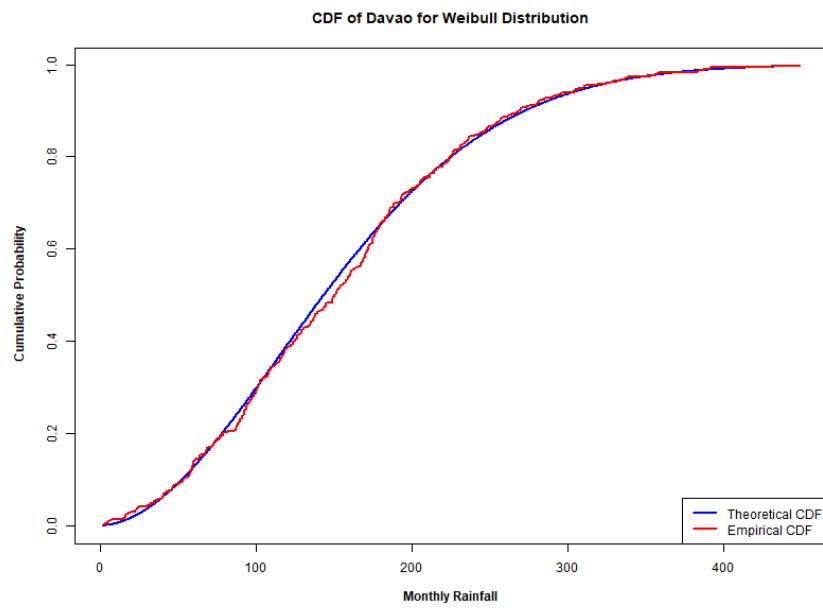


(a) Butuan

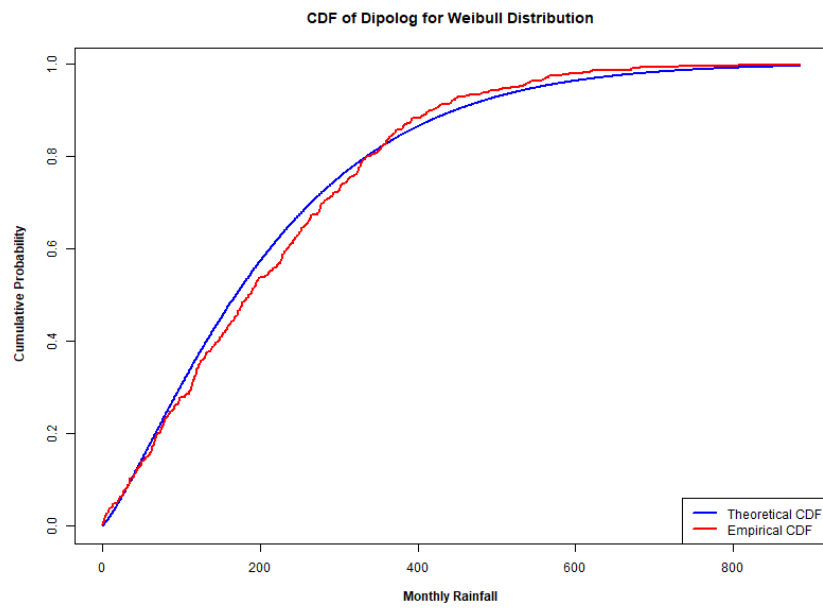


(b) Cotabato

Figure C.19: CDF of Monthly Rainfall for Butuan, and Cotabato

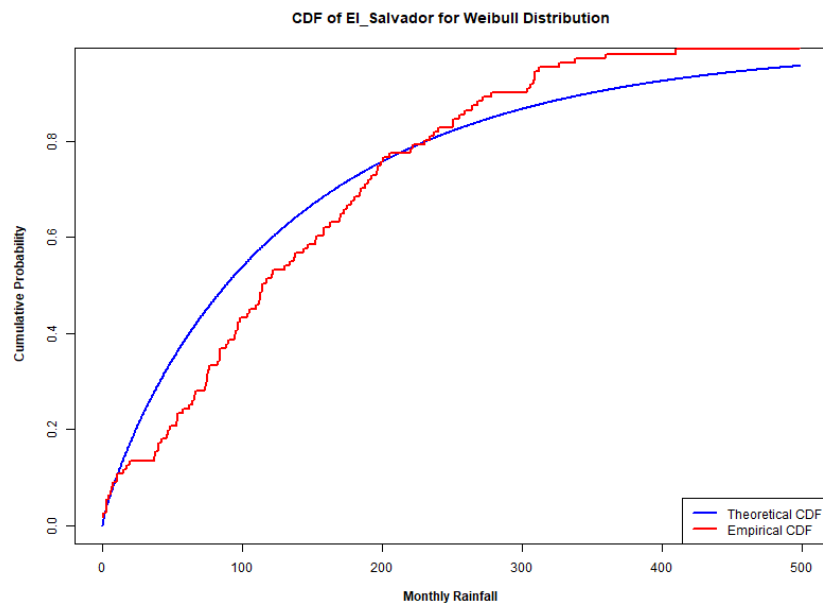


(a) Davao

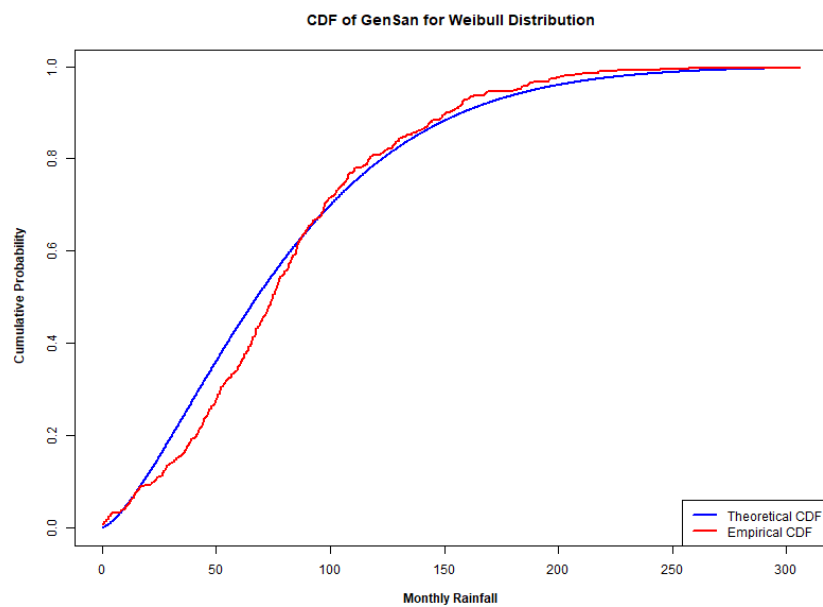


(b) Dipolog

Figure C.20: CDF of Monthly Rainfall for Davao, and Dipolog

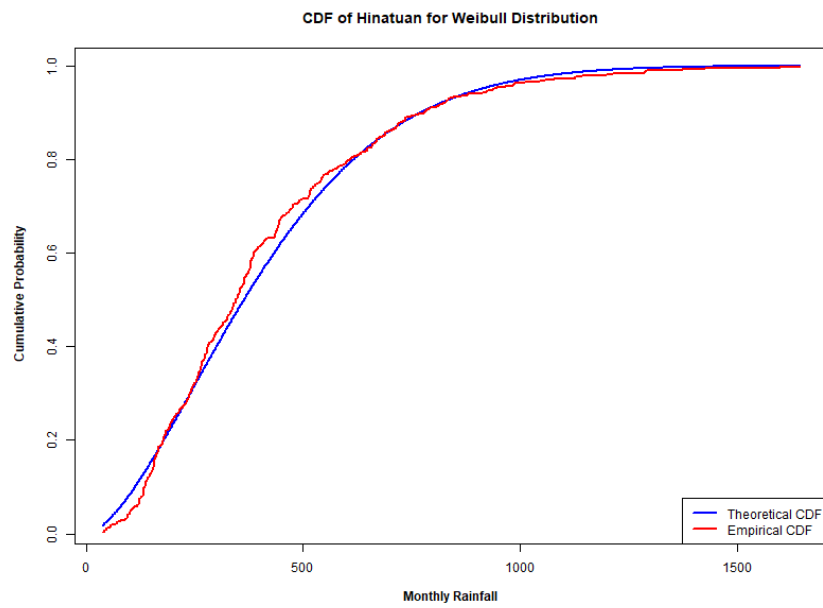


(a) El Salvador

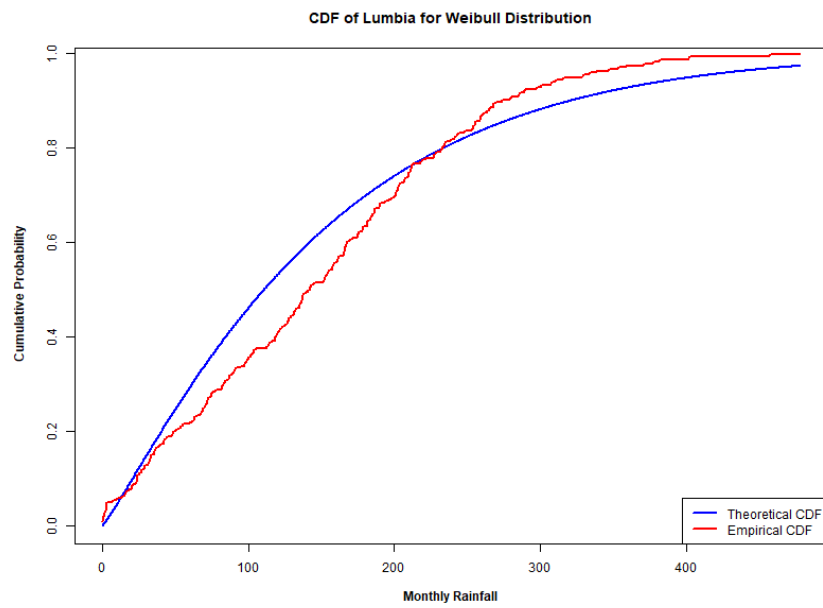


(b) General Santos

Figure C.21: CDF of Monthly Rainfall for El Salvador, and General Santos

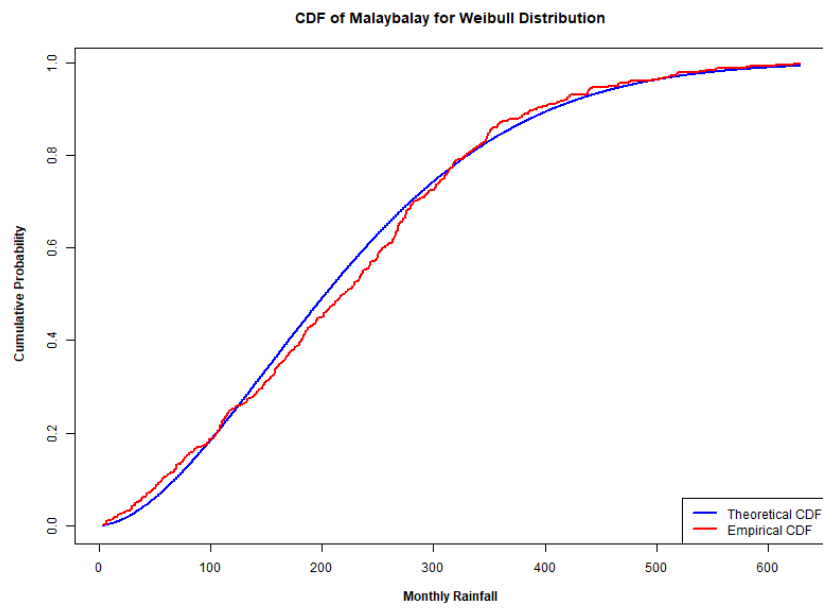


(a) Hinatuan

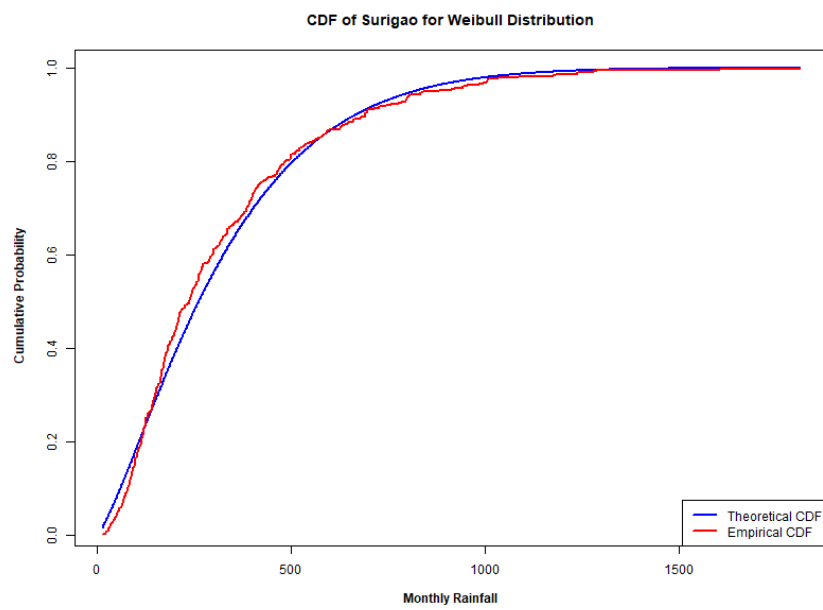


(b) Lumbia

Figure C.22: CDF of Monthly Rainfall for Hinatuan, and Lumbia

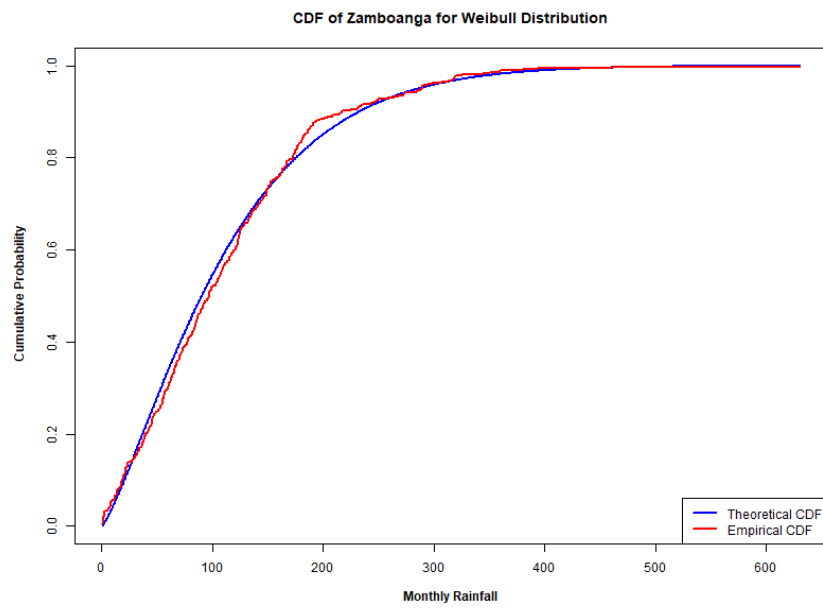


(a) Malaybalay



(b) Surigao

Figure C.23: CDF of Monthly Rainfall for Malaybalay, and Surigao



(a) Zamboanga

Figure C.24: CDF of Monthly Rainfall for Zamboanga

APPENDIX D

WEEKLY RAINFALL EXCEEDING THE 75th PERCENTILE

This appendix presents the cumulative probability distributions of weekly rainfall exceeding the 75th percentile for the remaining four (4) probability distributions considered in the analysis. The Generalized Extreme-Value (GEV) distribution is the primary focus of the analysis presented in Chapter 4 Table 4.9 for weekly rainfall exceeding the 75th percentile. However, these additional results are provided for exploration and comparative purposes.

D.1 Cumulative Probability Distribution

Figures below illustrates the cumulative probability distribution of weekly rainfall exceeding 75th percentile for the five (5) probability distributions fitted in the study.

D.1.1 Generalized Pareto Distribution

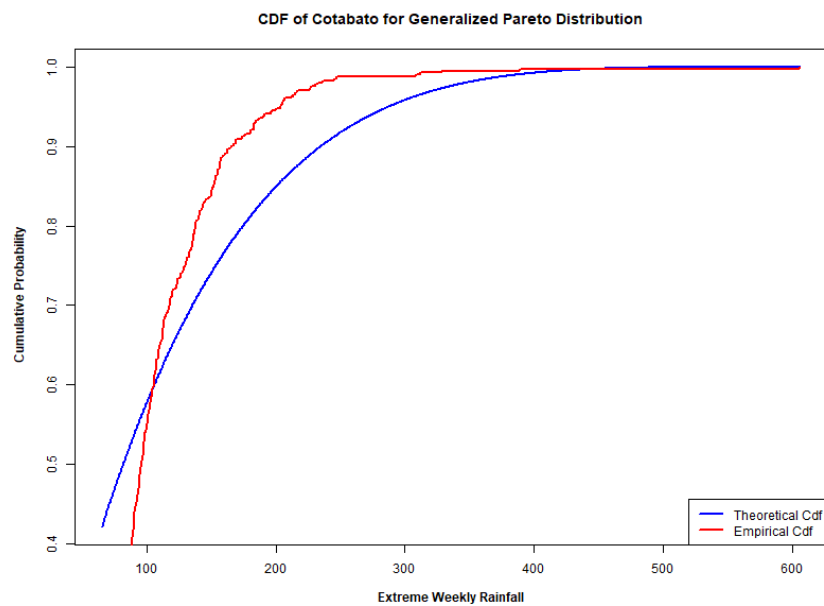
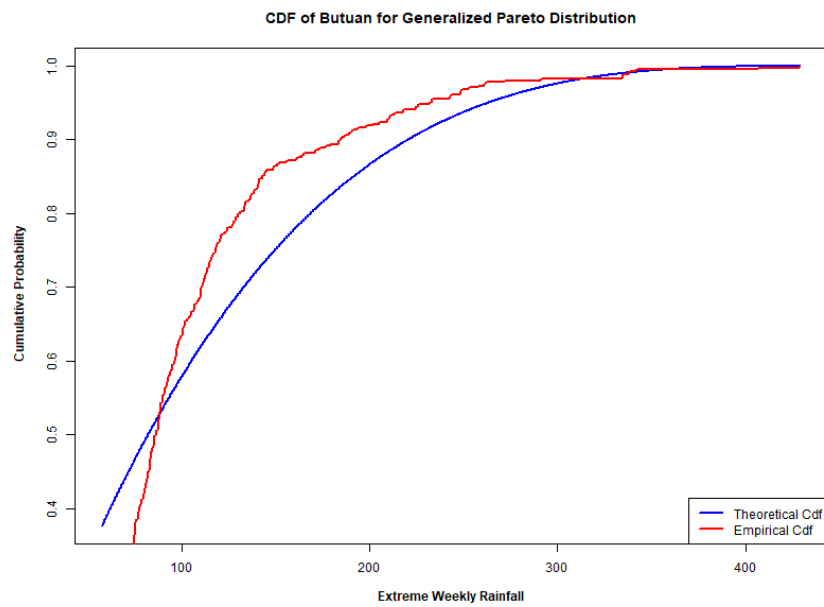
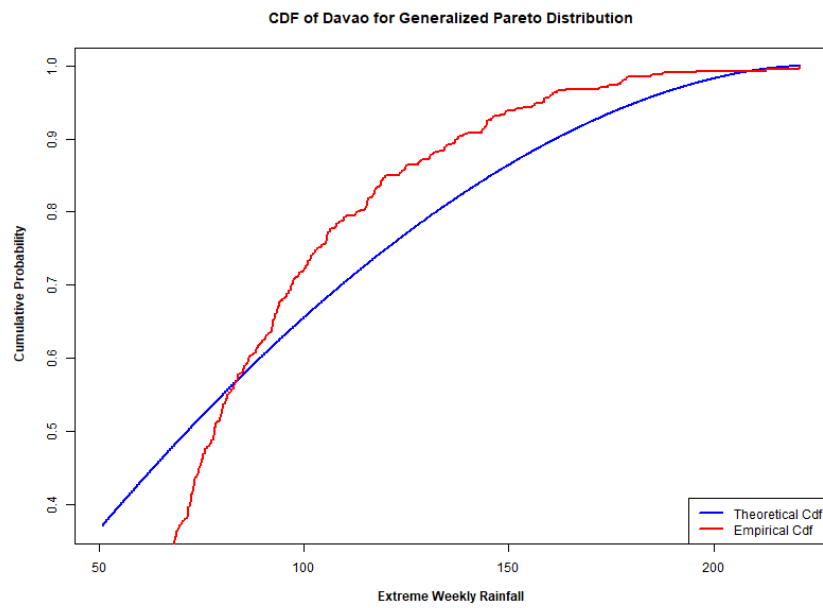
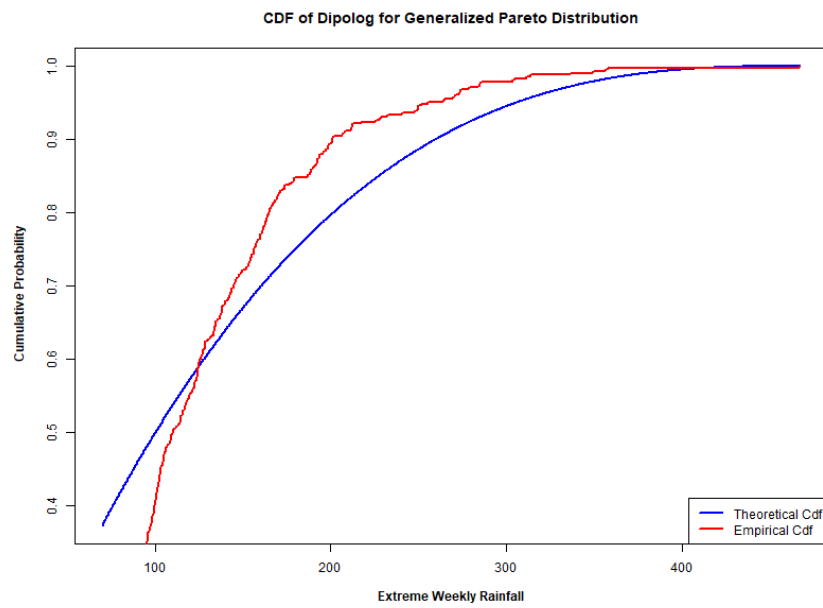


Figure D.1: CDF of Weekly Rainfall Exceeding the 75th percentile for Butuan, and Cotabato

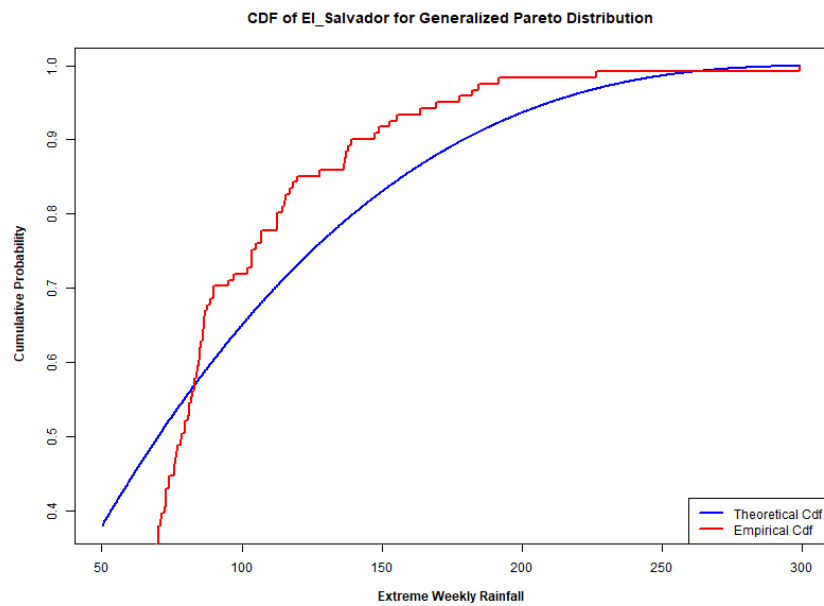


(a) Davao

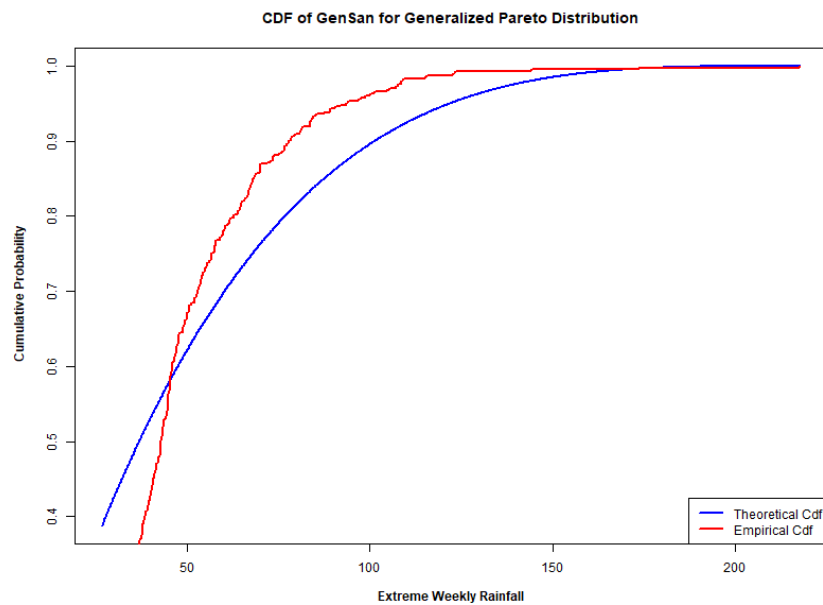


(b) Dipolog

Figure D.2: CDF of Weekly Rainfall Exceeding the 75th percentile for Davao, and Dipolog

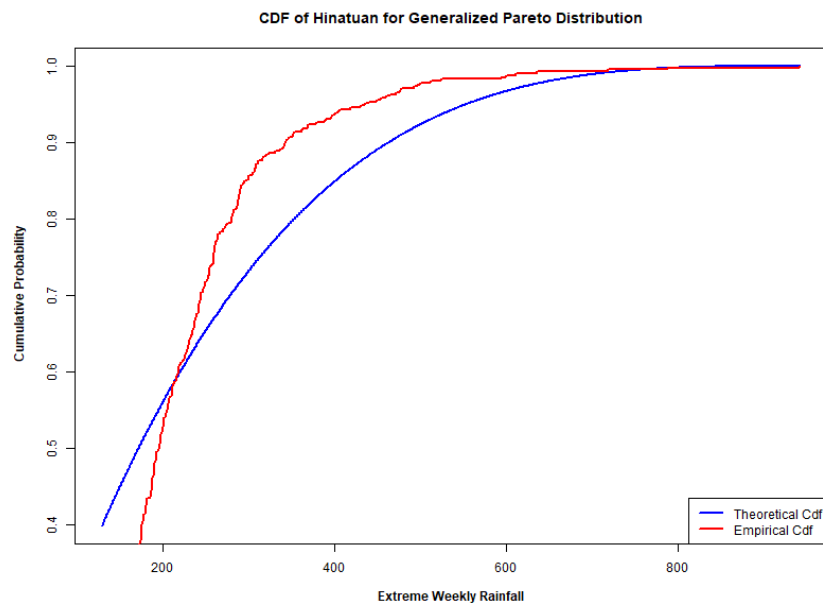


(a) El Salvador

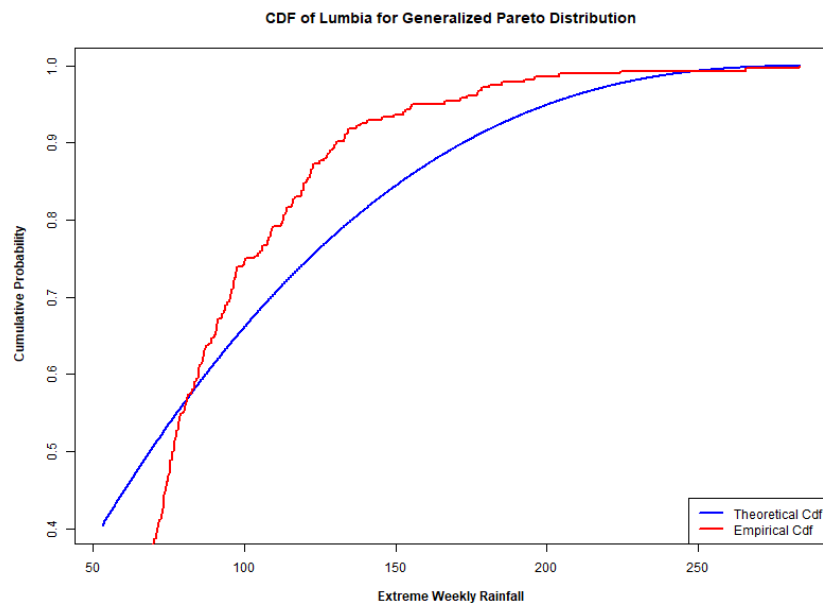


(b) General Santos

Figure D.3: CDF of Weekly Rainfall Exceeding the 75th percentile for El Salvador, and General Santos



(a) Hinatuan



(b) Lumbia

Figure D.4: CDF of Weekly Rainfall Exceeding the 75th percentile for Hinatuan, and Lumbia

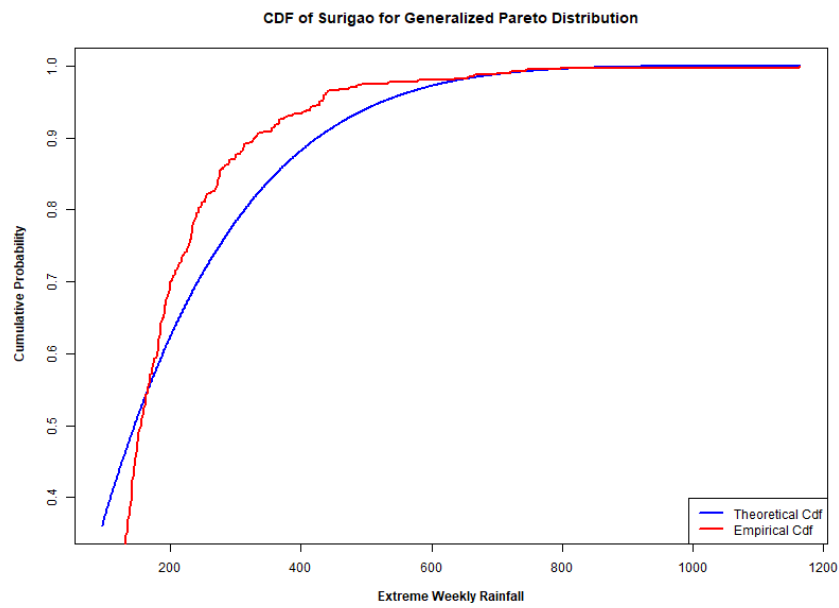
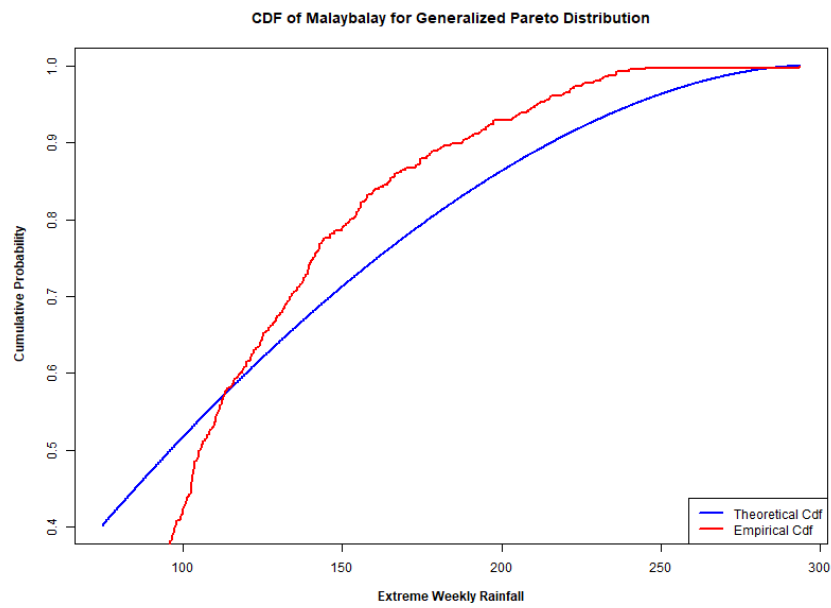
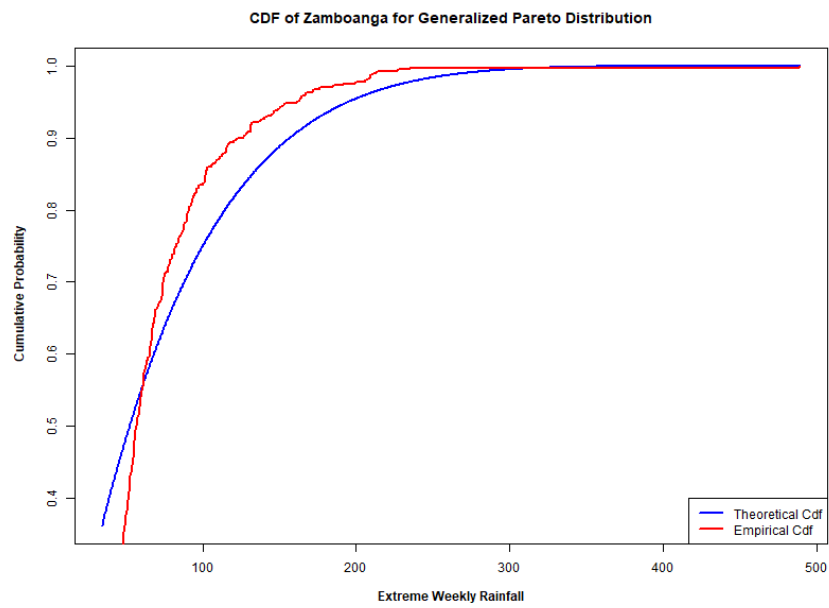


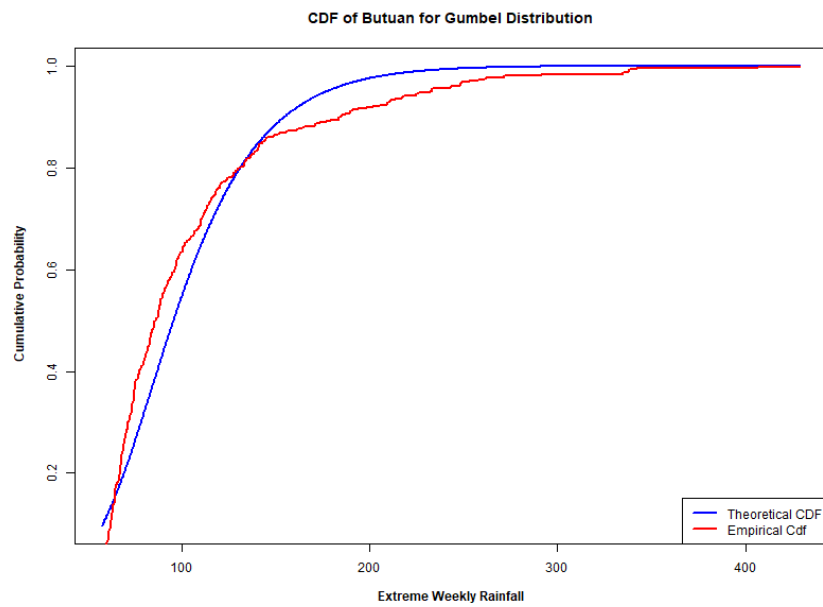
Figure D.5: CDF of Weekly Rainfall Exceeding the 75th percentile for Malaybalay, and Surigao



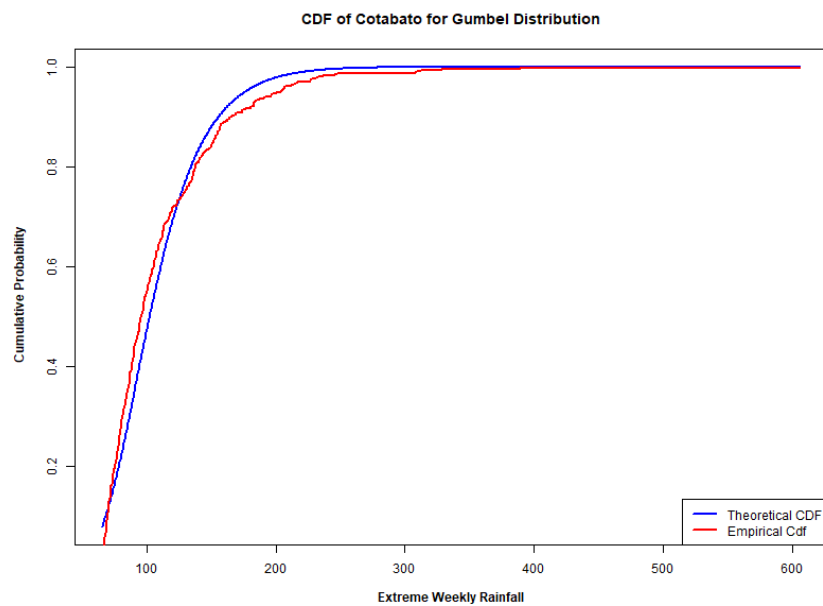
(a) Zamboanga

Figure D.6: CDF of Weekly Rainfall Exceeding the 75th percentile for Zamboanga

D.1.2 Gumbel Distribution

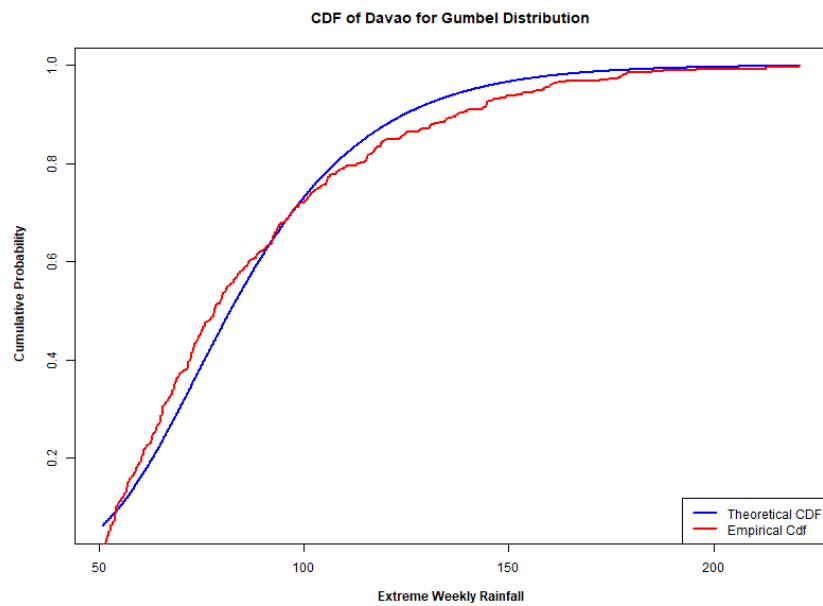


(a) Butuan

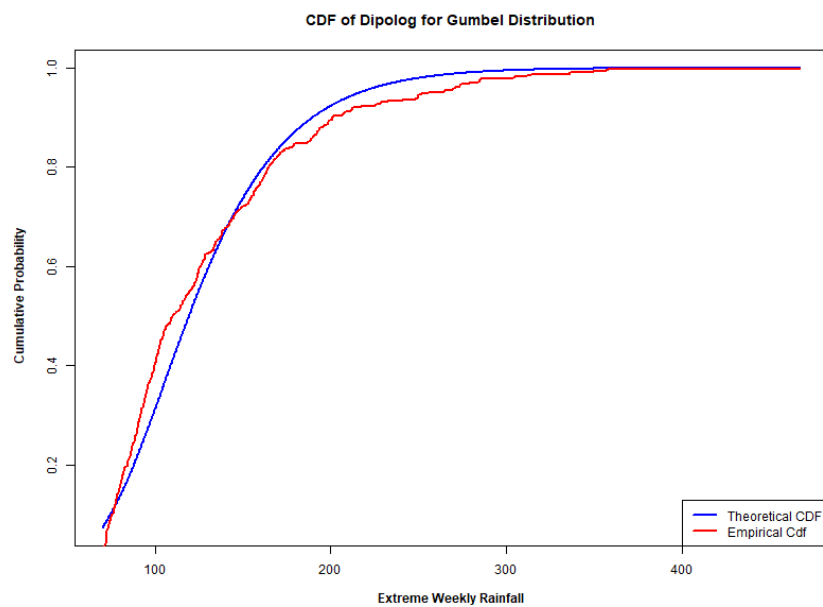


(b) Cotabato

Figure D.7: CDF of Weekly Rainfall Exceeding the 75th percentile for Butuan, and Cotabato

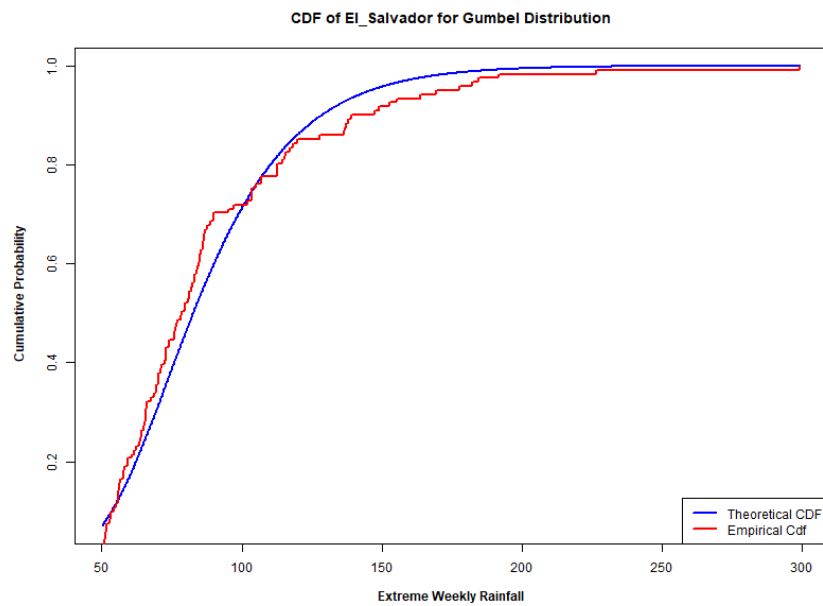


(a) Davao

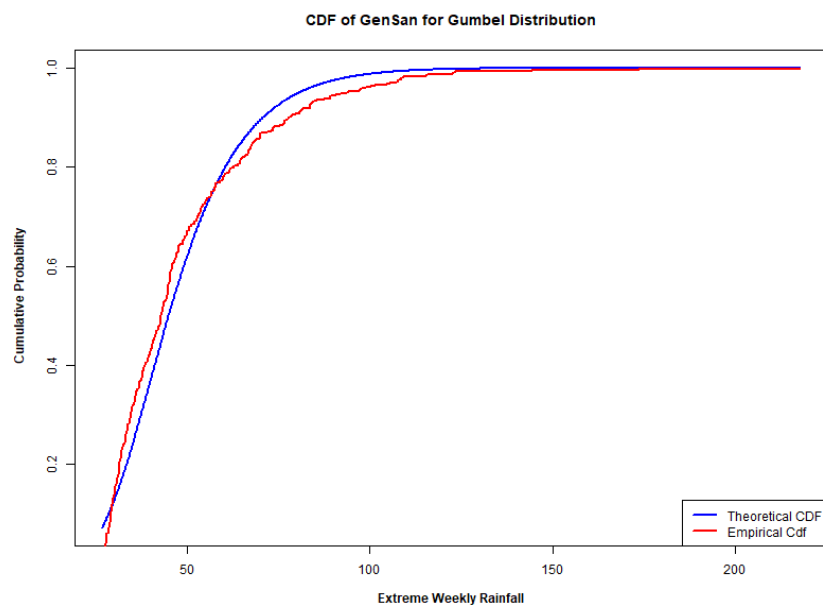


(b) Dipolog

Figure D.8: CDF of Weekly Rainfall Exceeding the 75th percentile for Davao, and Dipolog

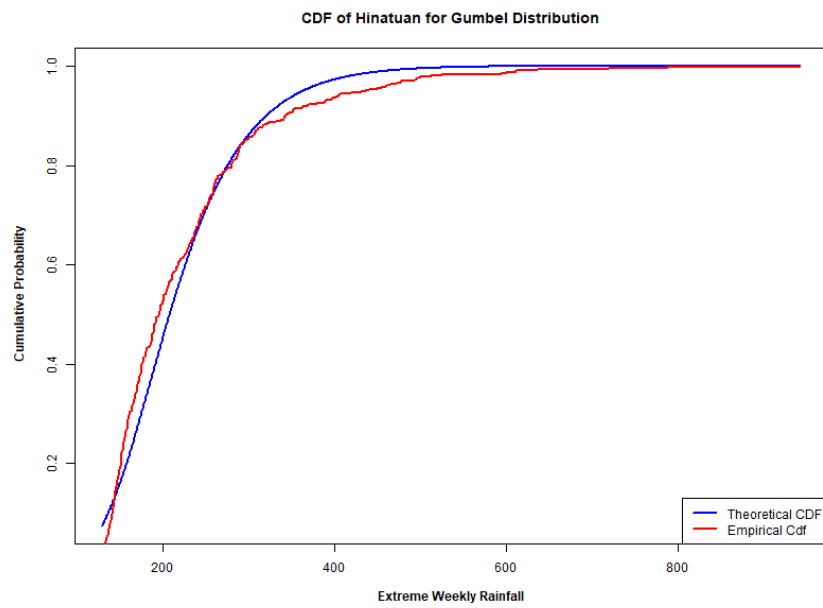


(a) El Salvador

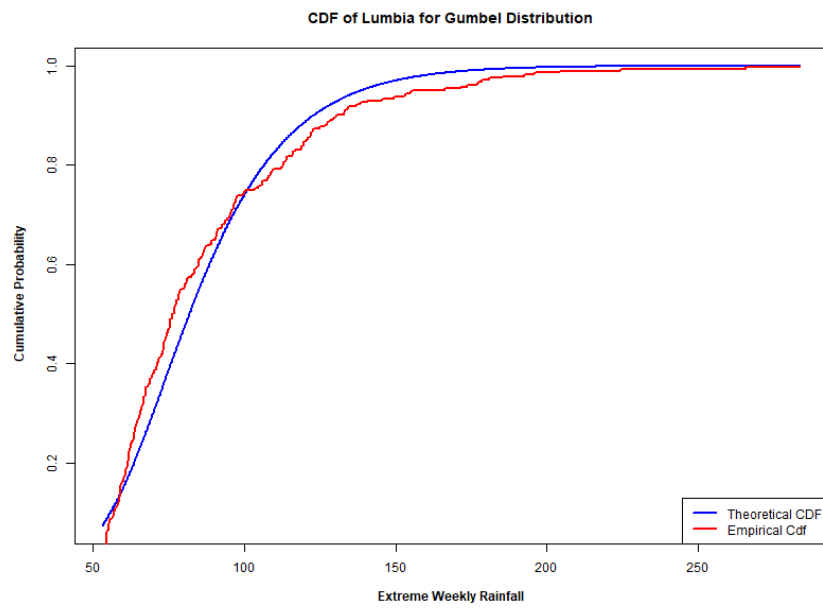


(b) General Santos

Figure D.9: CDF of Weekly Rainfall Exceeding the 75th percentile for El Salvador, and General Santos

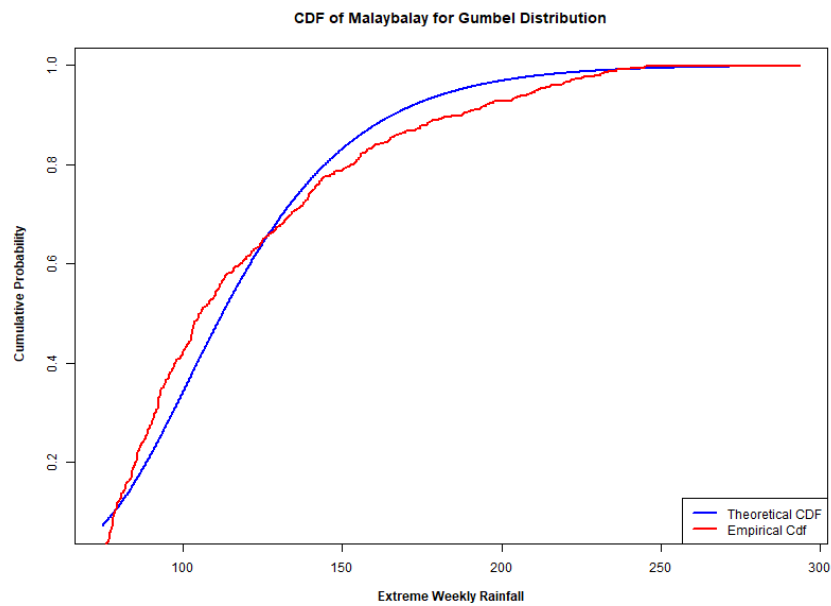


(a) Hinatuan

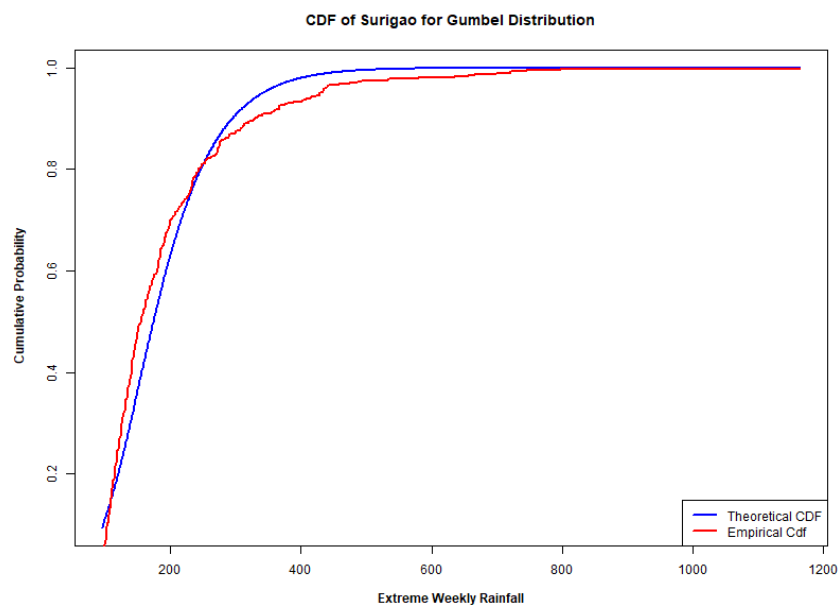


(b) Lumbia

Figure D.10: CDF of Weekly Rainfall Exceeding the 75th percentile for Hinatuan, and Lumbia

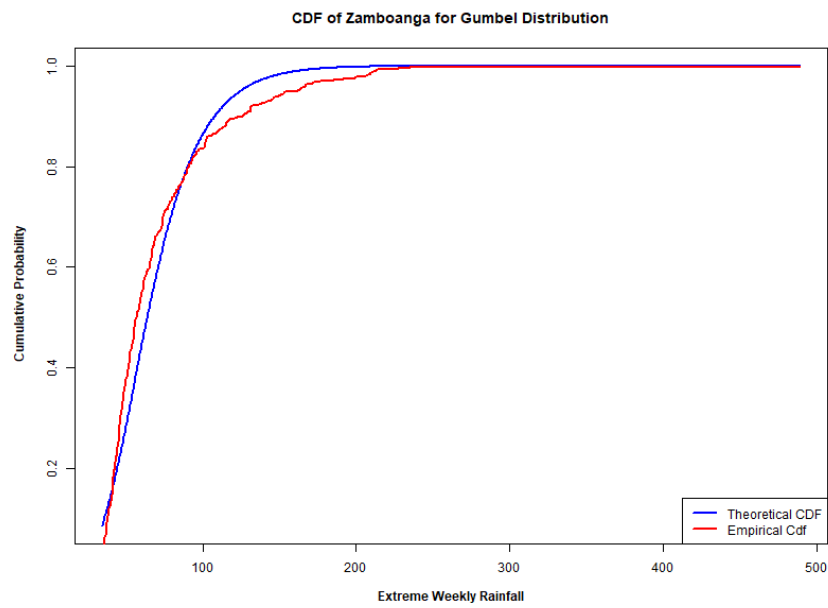


(a) Malaybalay



(b) Surigao

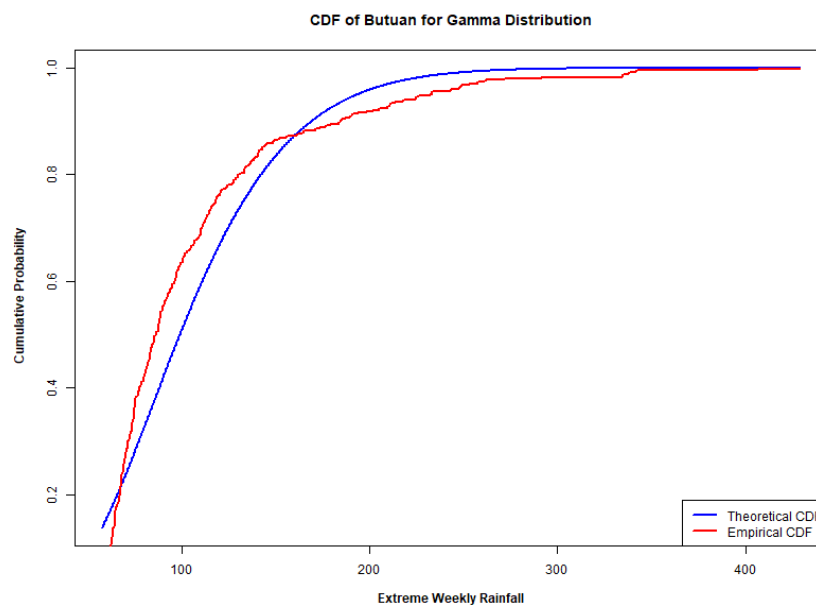
Figure D.11: CDF of Weekly Rainfall Exceeding the 75th percentile for Malaybalay, and Surigao



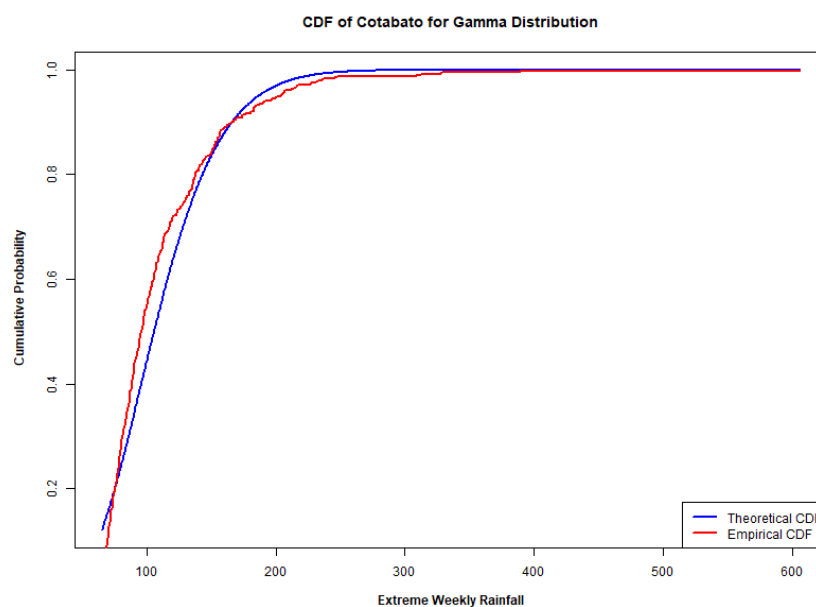
(a) Zamboanga

Figure D.12: CDF of Weekly Rainfall Exceeding the 75th percentile for Zamboanga

D.1.3 Gamma Distribution

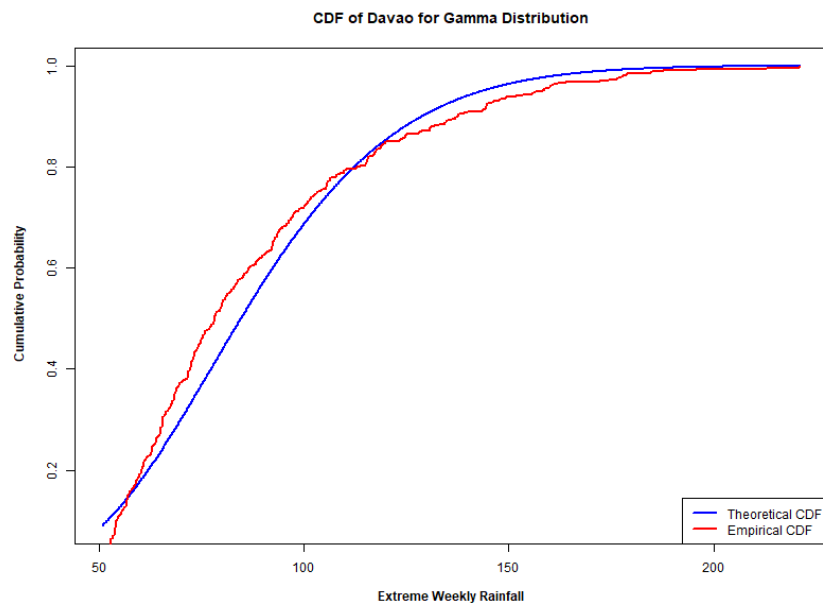


(a) Butuan

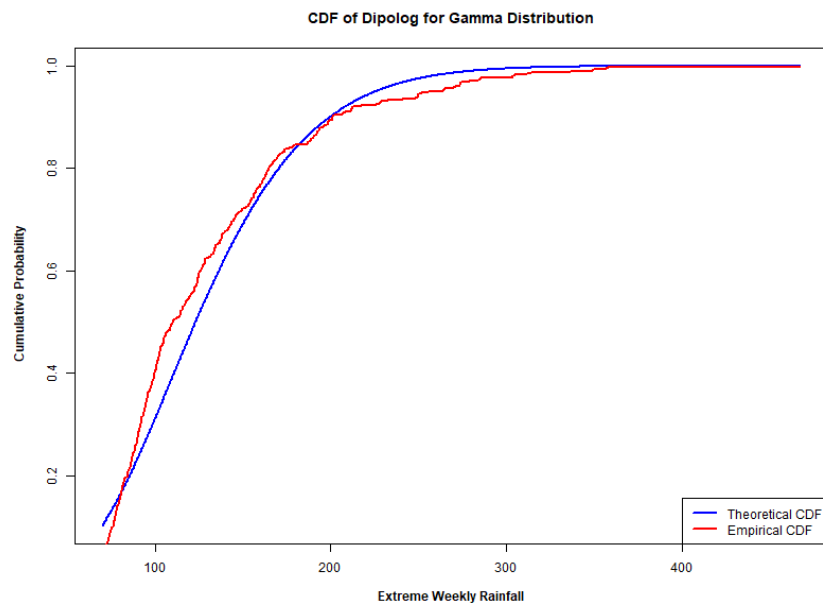


(b) Cotabato

Figure D.13: CDF of Weekly Rainfall Exceeding the 75th percentile for Butuan, and Cotabato

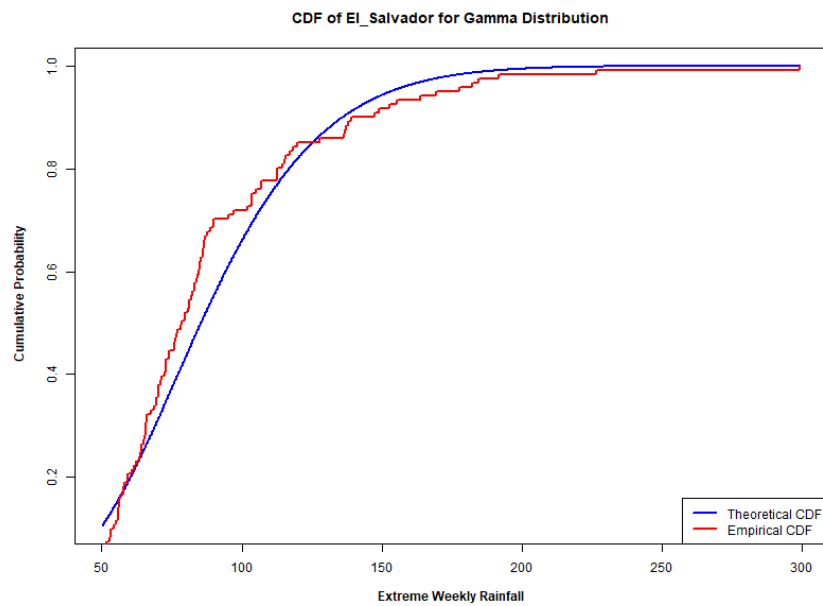


(a) Davao

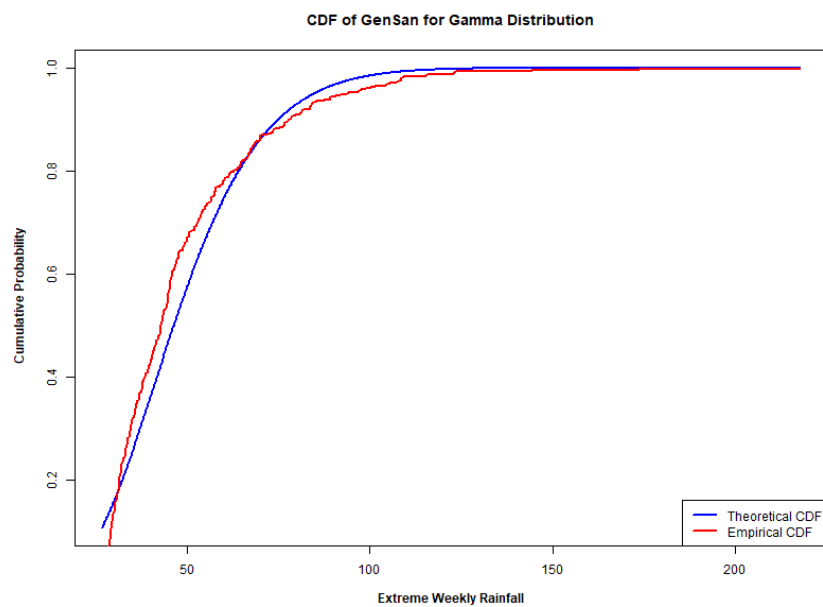


(b) Dipolog

Figure D.14: CDF of Weekly Rainfall Exceeding the 75th percentile for Davao, and Dipolog

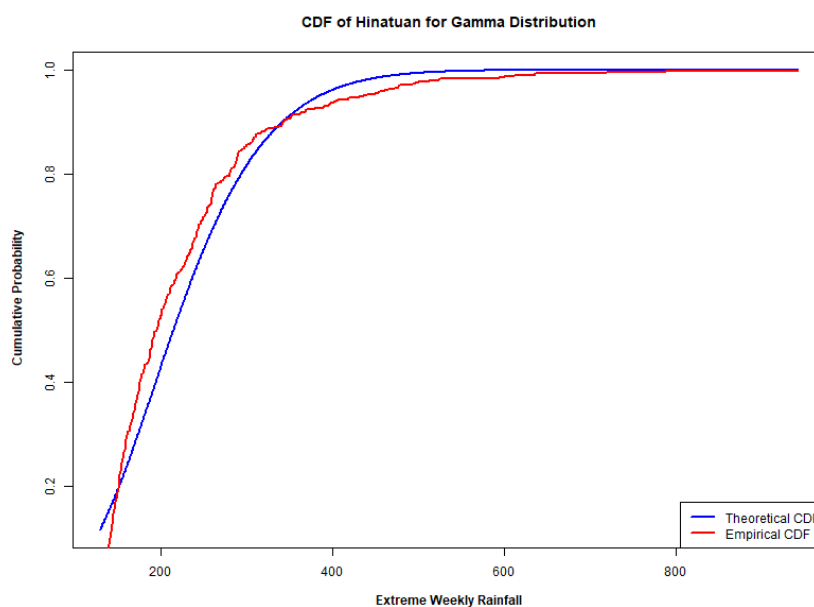


(a) El Salvador

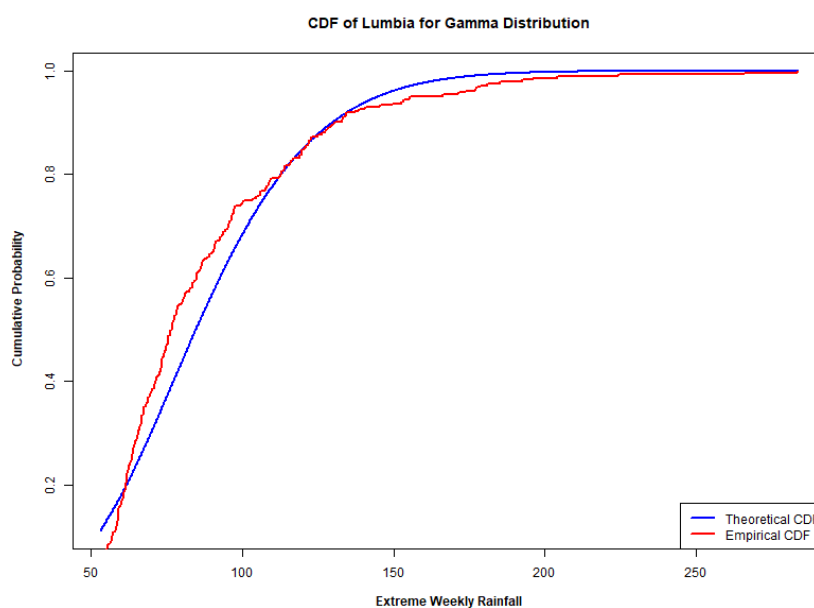


(b) General Santos

Figure D.15: CDF of Weekly Rainfall Exceeding the 75th percentile for El Salvador, and General Santos

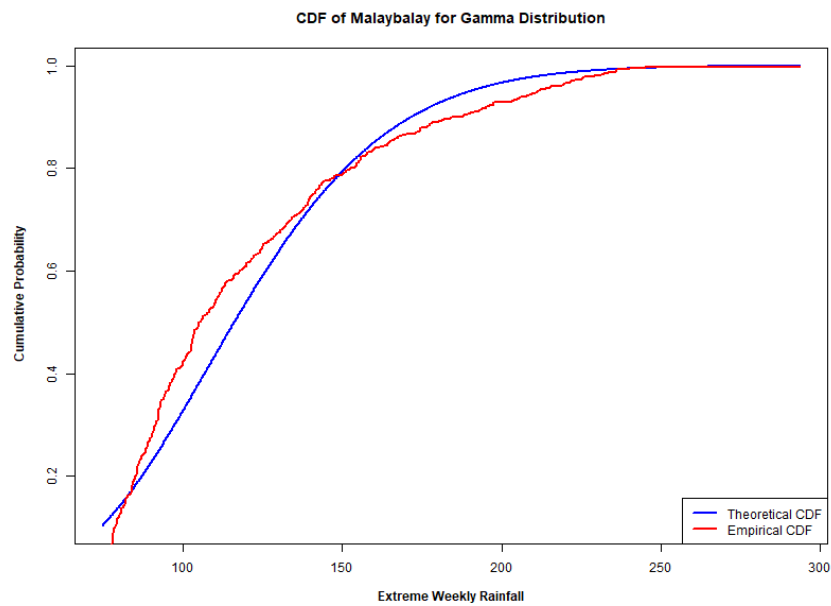


(a) Hinatuan

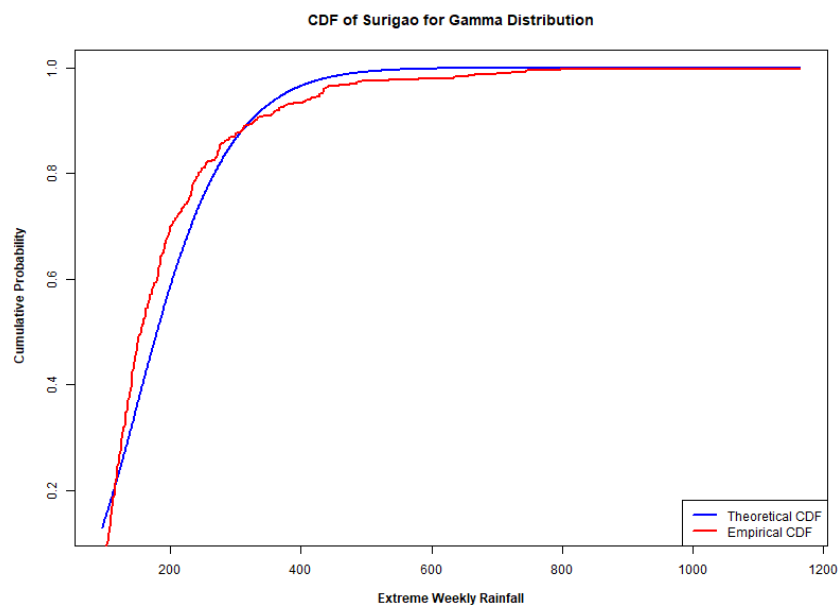


(b) Lumbia

Figure D.16: CDF of Weekly Rainfall Exceeding the 75th percentile for Hinatuan, and Lumbia

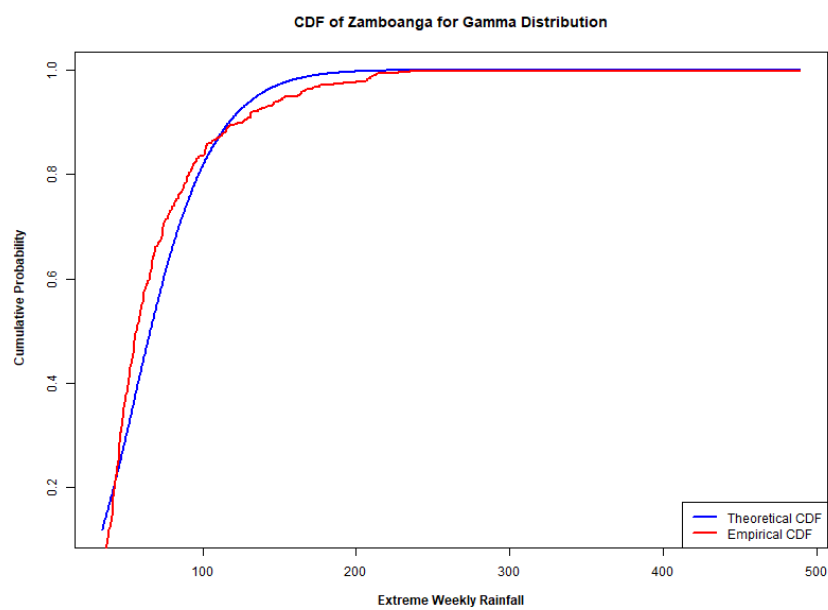


(a) Malaybalay



(b) Surigao

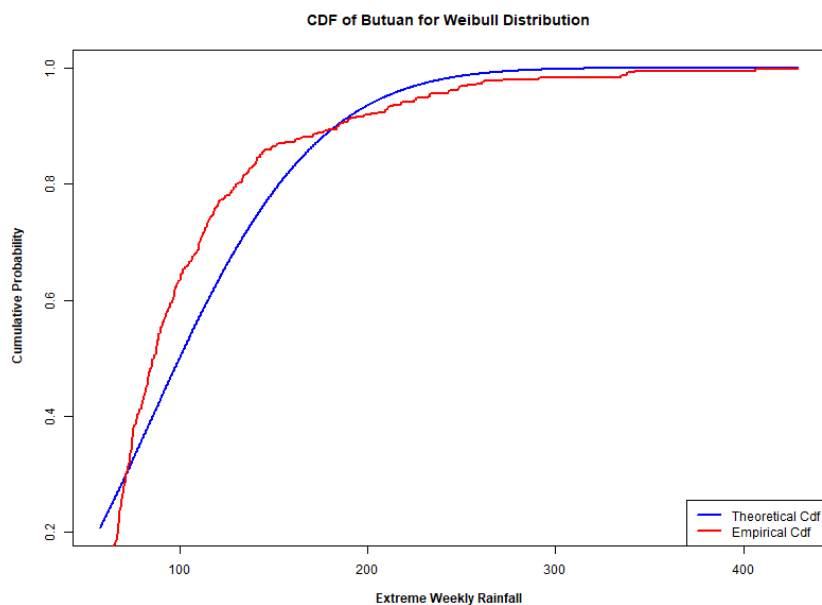
Figure D.17: CDF of Weekly Rainfall Exceeding the 75th percentile for Malaybalay, and Surigao



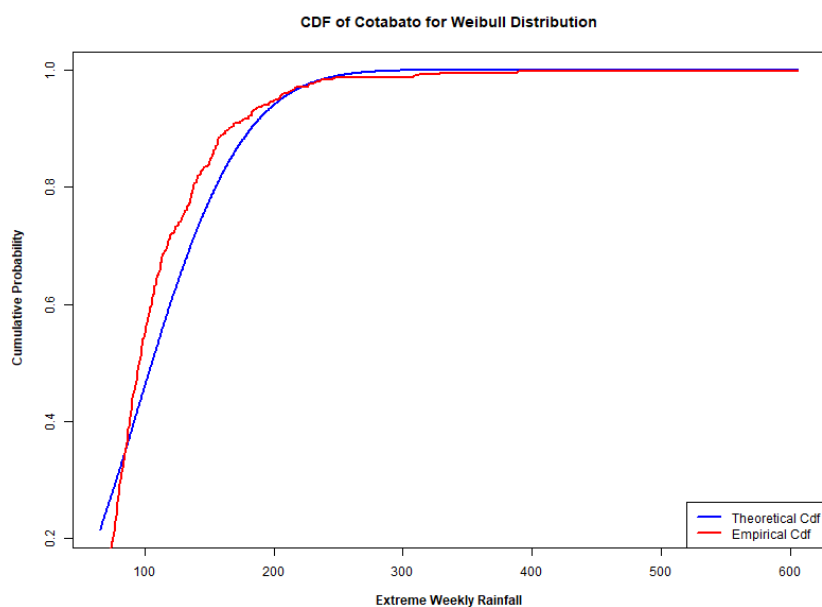
(a) Zamboanga

Figure D.18: CDF of Weekly Rainfall Exceeding the 75th percentile for Zamboanga

D.1.4 Weibull Distribution

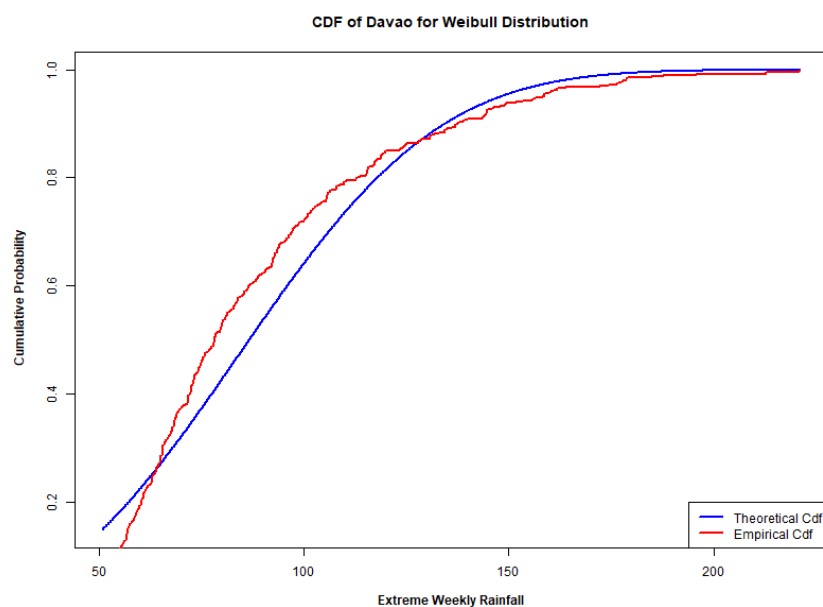


(a) Butuan

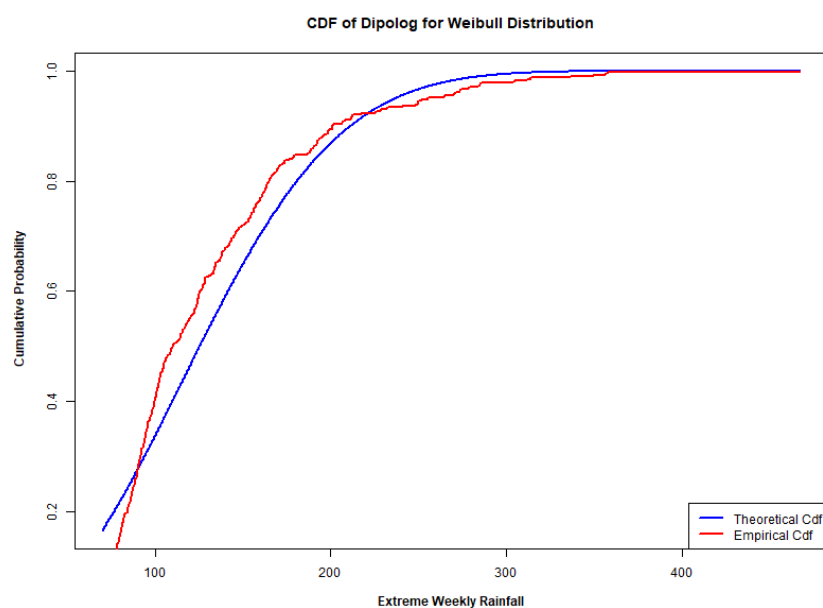


(b) Cotabato

Figure D.19: CDF of Weekly Rainfall Exceeding the 75th percentile for Butuan, and Cotabato

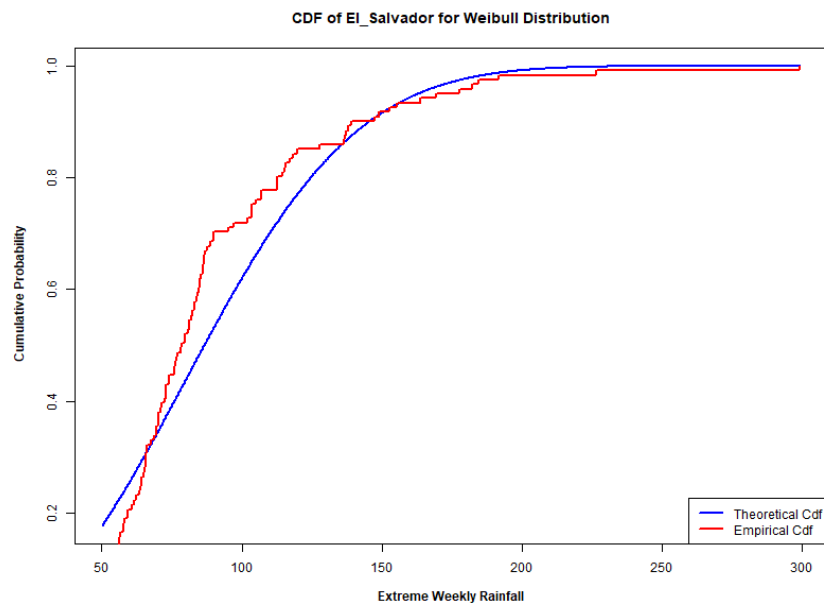


(a) Davao

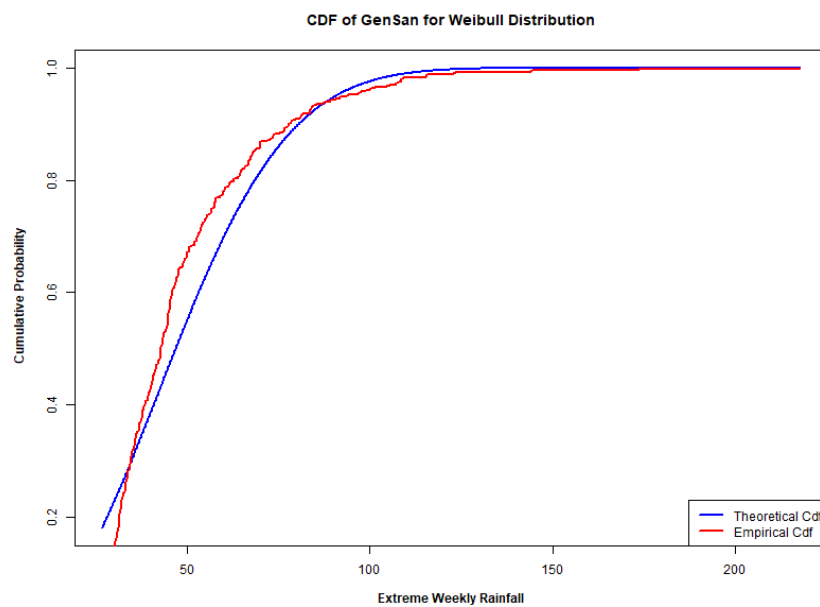


(b) Dipolog

Figure D.20: CDF of Weekly Rainfall Exceeding the 75th percentile for Davao, and Dipolog

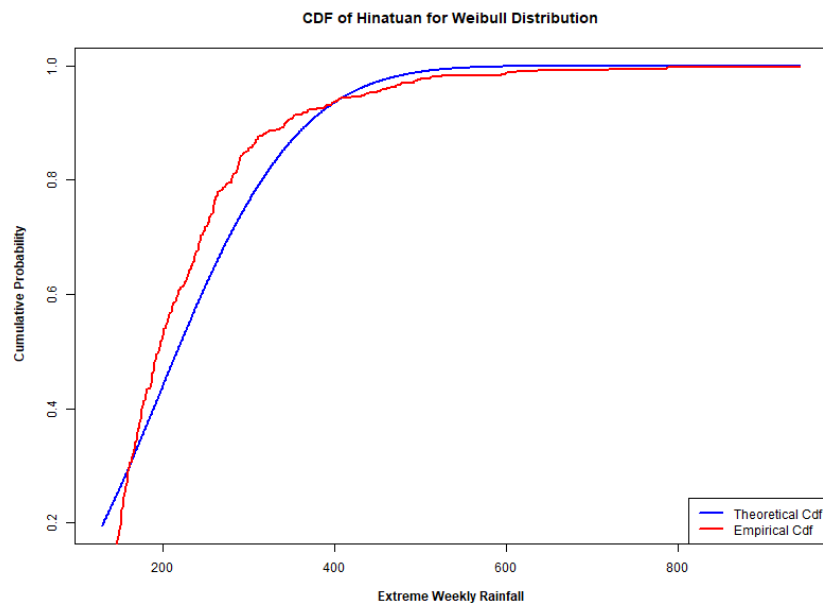


(a) El Salvador

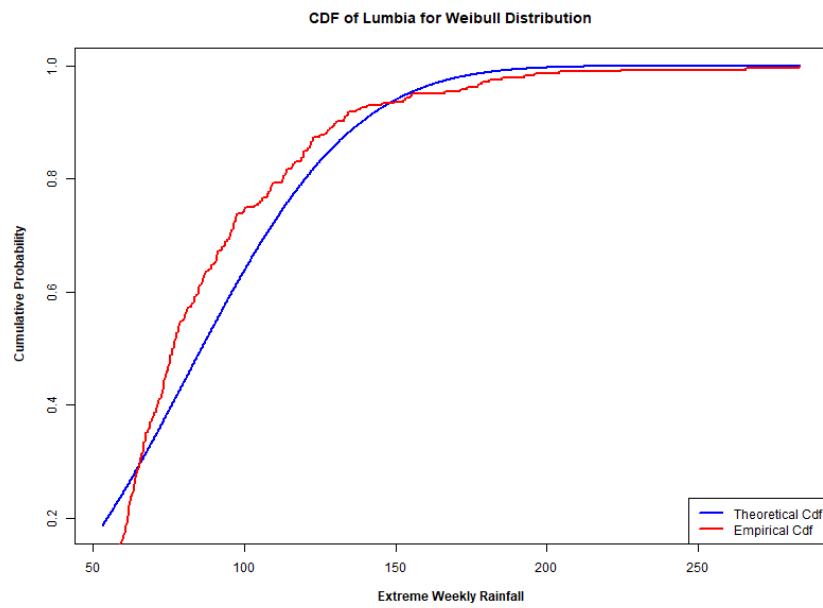


(b) General Santos

Figure D.21: CDF of Weekly Rainfall Exceeding the 75th percentile for El Salvador, and General Santos

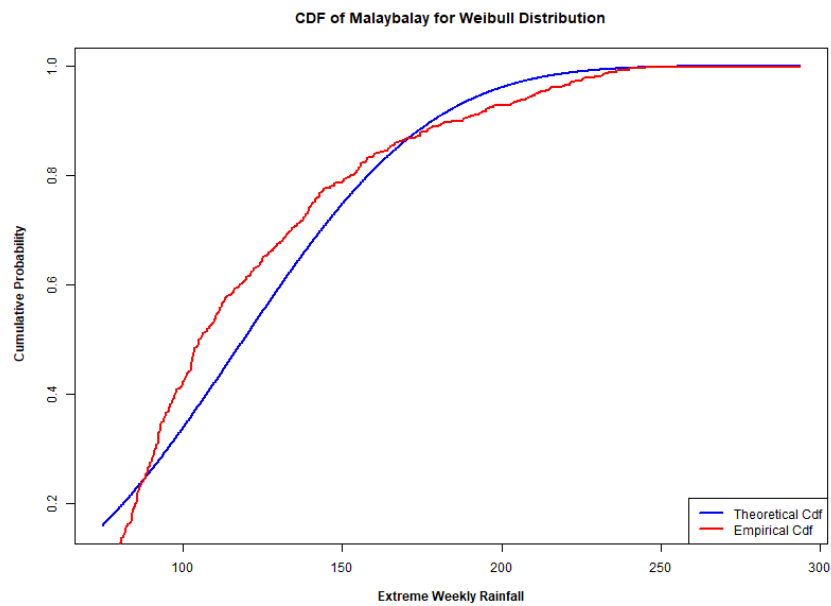


(a) Hinatuan

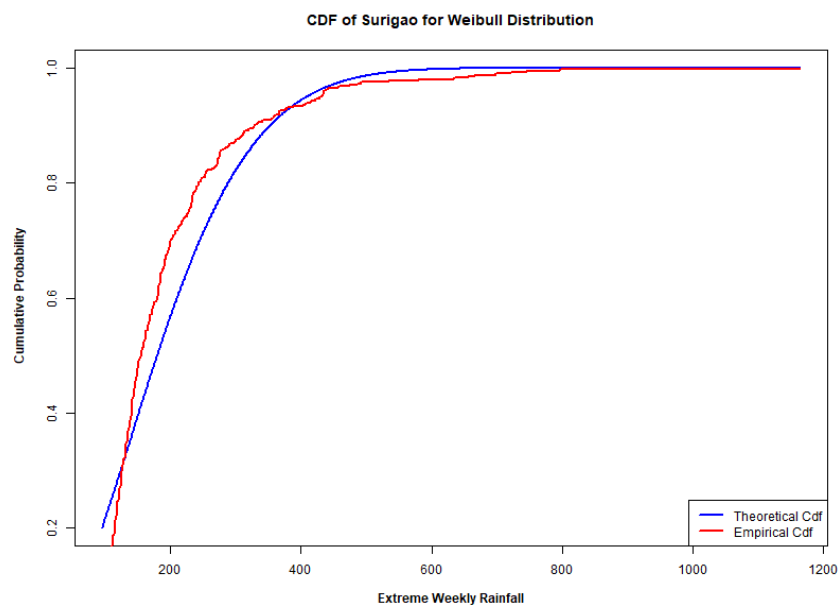


(b) Lumbia

Figure D.22: CDF of Weekly Rainfall Exceeding the 75th percentile for Hinatuan, and Lumbia

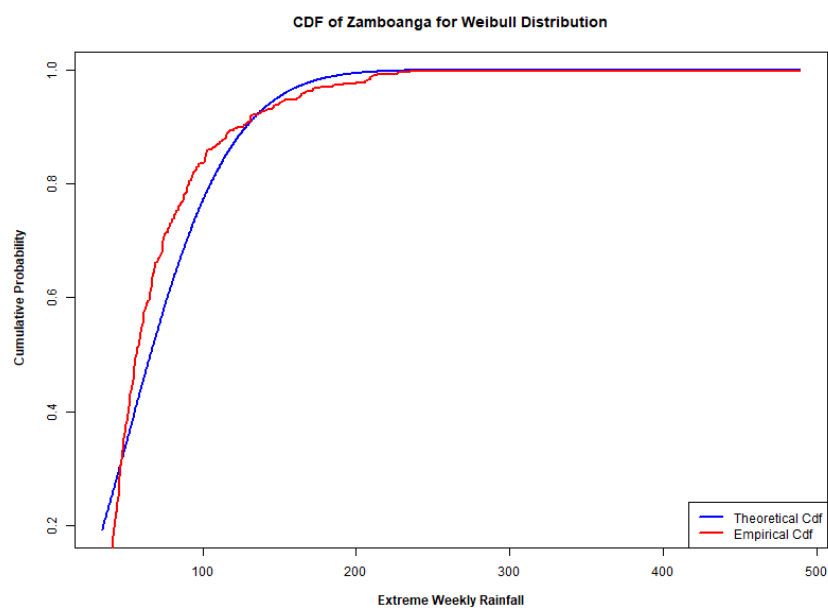


(a) Malaybalay



(b) Surigao

Figure D.23: CDF of Weekly Rainfall Exceeding the 75th percentile for Malaybalay, and Surigao



(a) Zamboanga

Figure D.24: CDF of Weekly Rainfall Exceeding the 75th percentile for Zamboanga

APPENDIX E

WEEKLY RAINFALL EXCEEDING THE 90th PERCENTILE

This appendix displays the cumulative probability distributions of weekly rainfall exceeding the 90th percentile for the remaining four (4) probability distributions evaluated in the analysis. While Chapter 4 Table 4.11 focuses on the appropriate probability distribution, Generalized Extreme-Value, for the weekly rainfall exceeding the 90th percentile, these supplementary results for alternative probability distribution are shown for exploration and comparative purposes.

E.1 Cumulative Probability Distribution

The following figure shows the cumulative probability distribution of weekly rainfall exceeding 90th percentile for the five (5) probability distributions fitted in the study.

E.1.1 Generalized Pareto Distribution

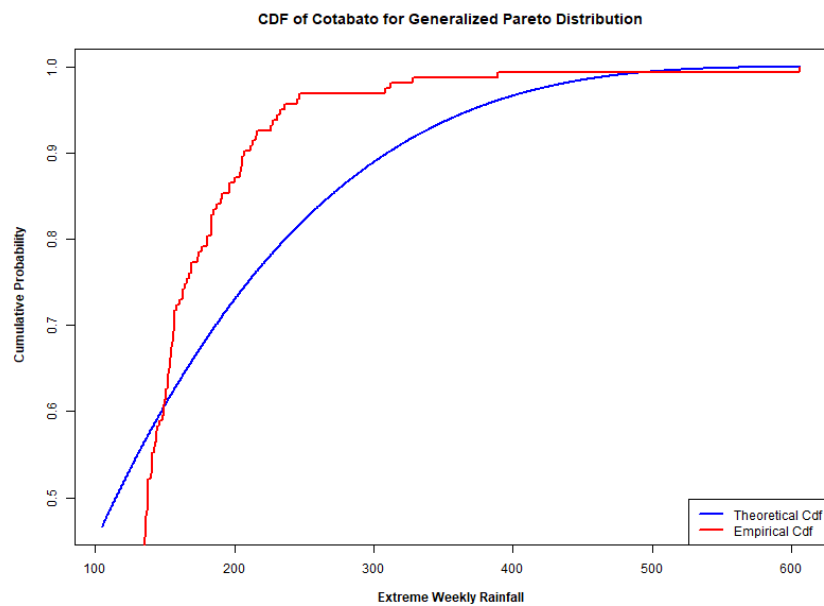
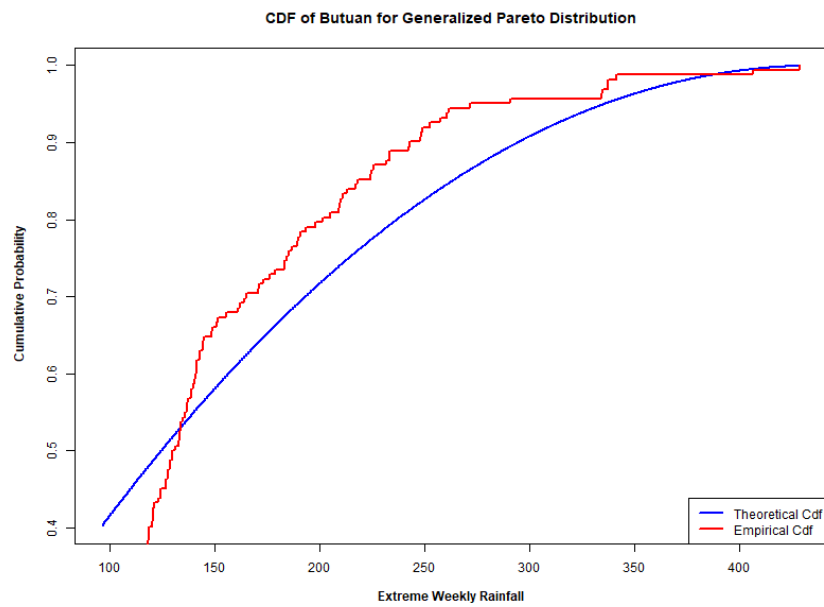


Figure E.1: CDF of Weekly Rainfall Exceeding the 75th percentile for Butuan, and Cotabato

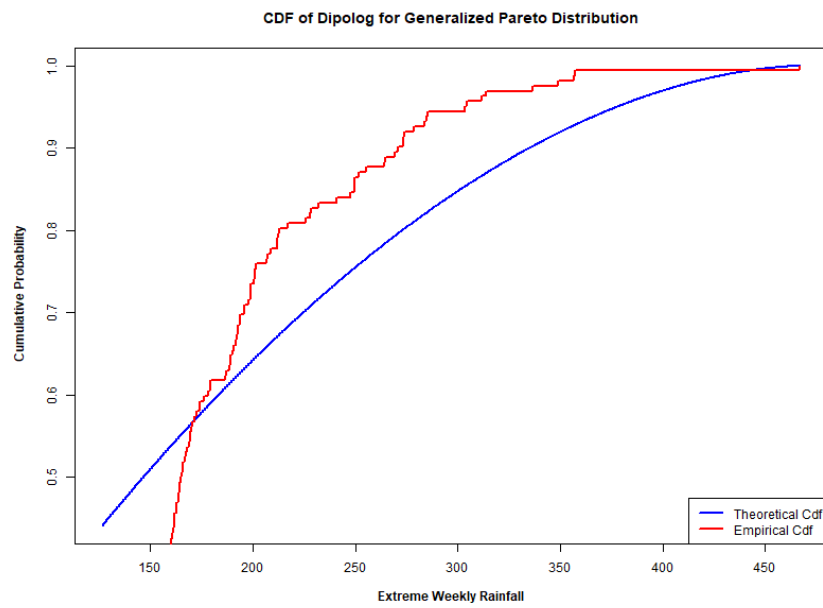
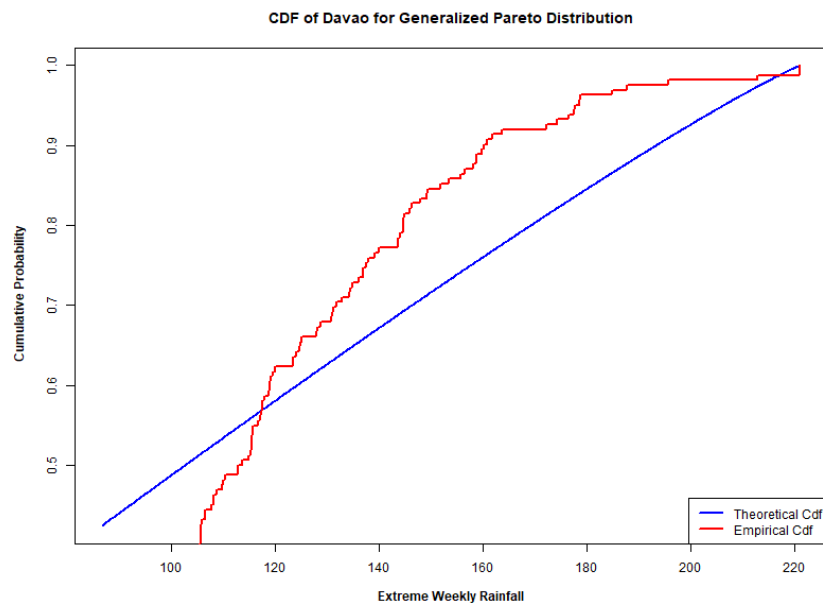
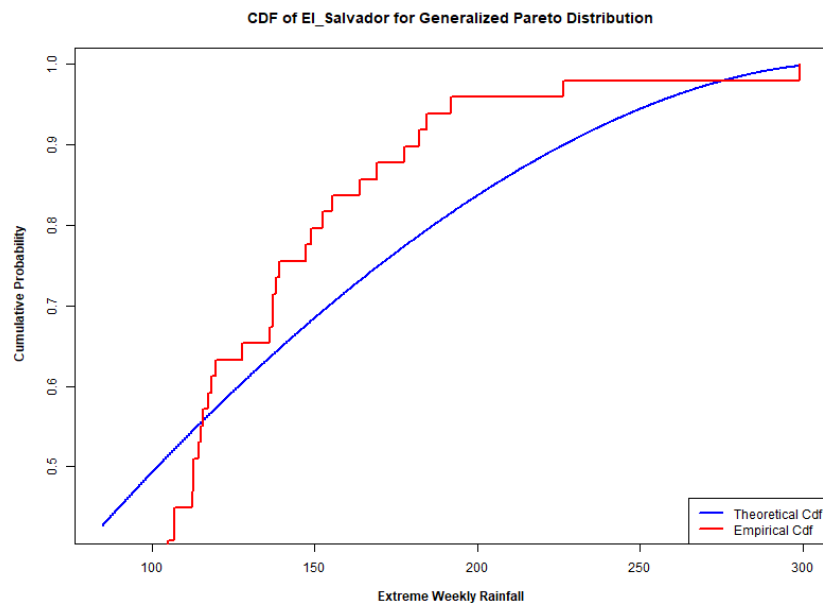
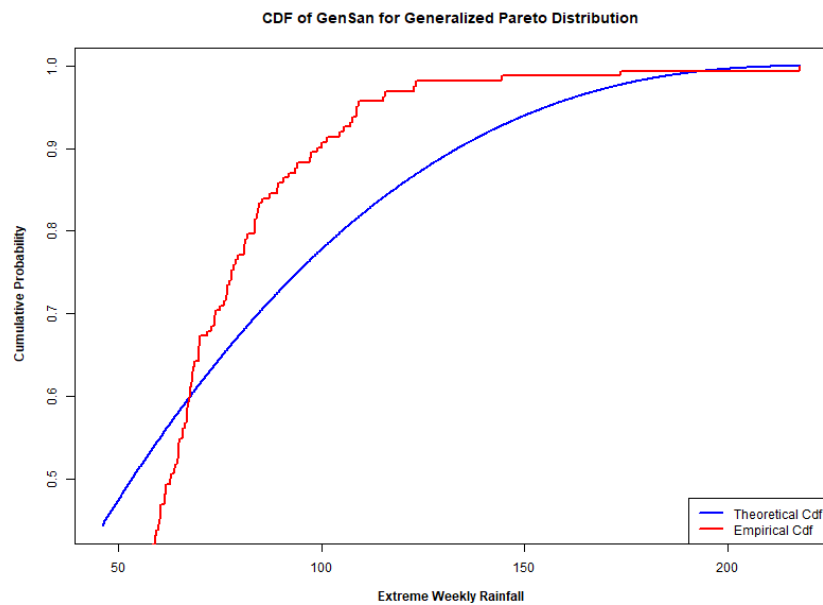


Figure E.2: CDF of Weekly Rainfall Exceeding the 75th percentile for Davao, and Dipolog

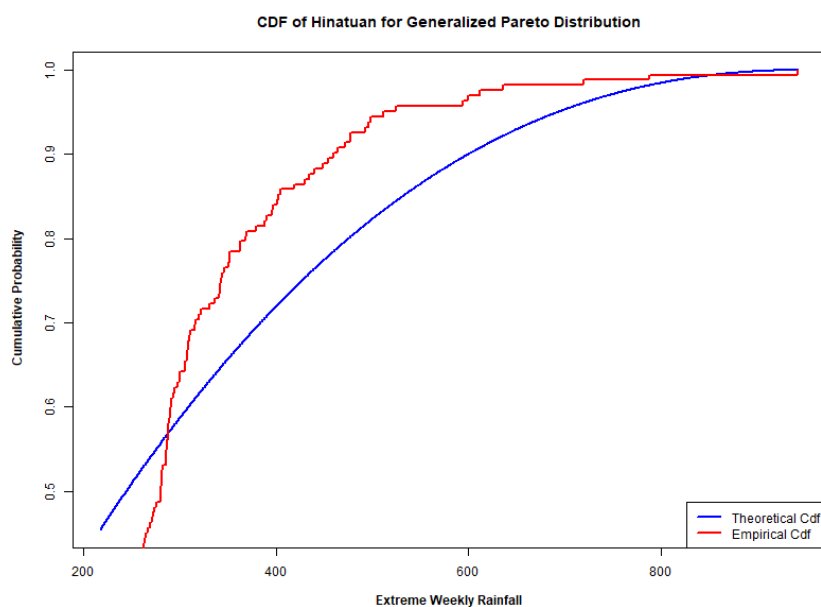


(a) El Salvador

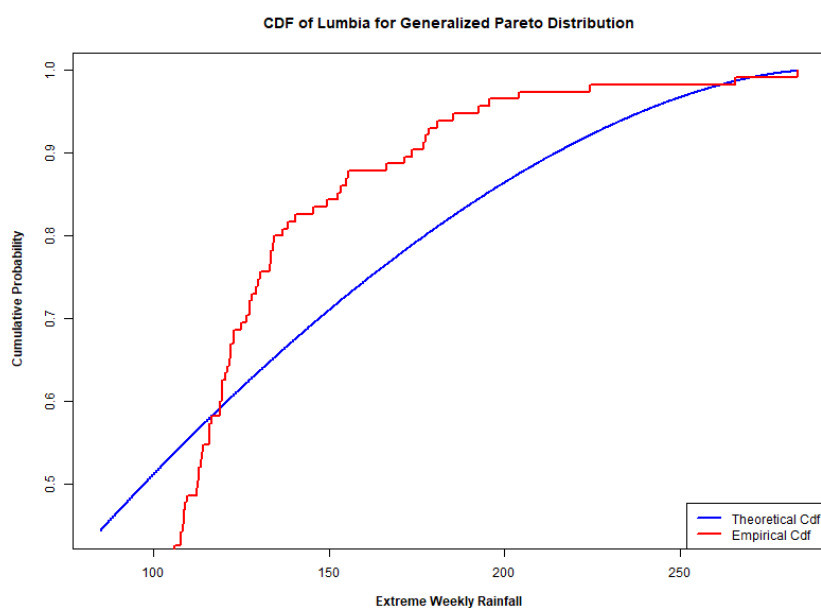


(b) General Santos

Figure E.3: CDF of Weekly Rainfall Exceeding the 75th percentile for El Salvador, and General Santos



(a) Hinatuan



(b) Lumbia

Figure E.4: CDF of Weekly Rainfall Exceeding the 75th percentile for Hinatuan, and Lumbia

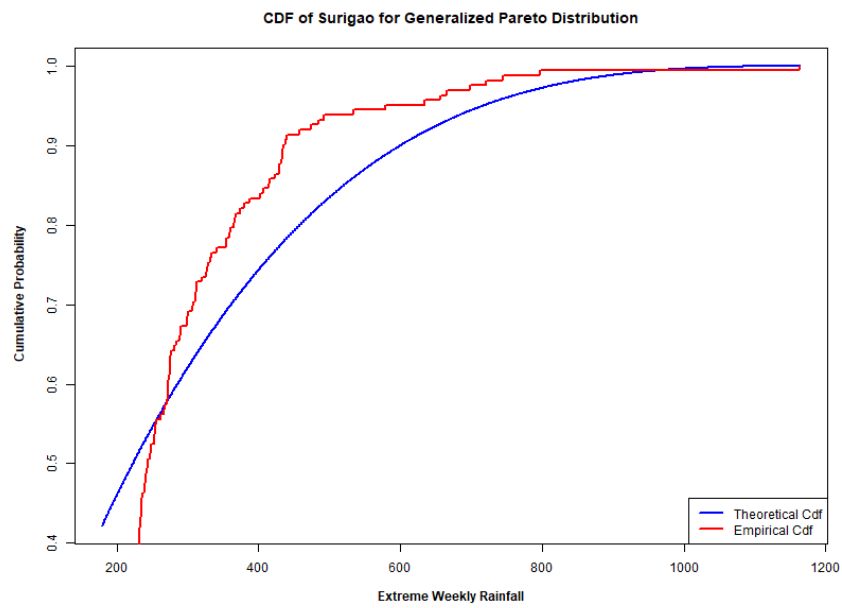
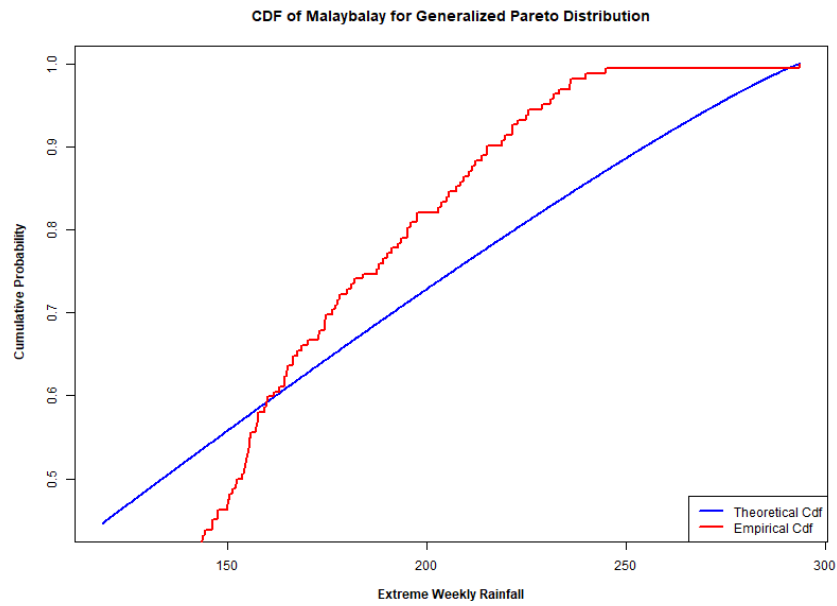
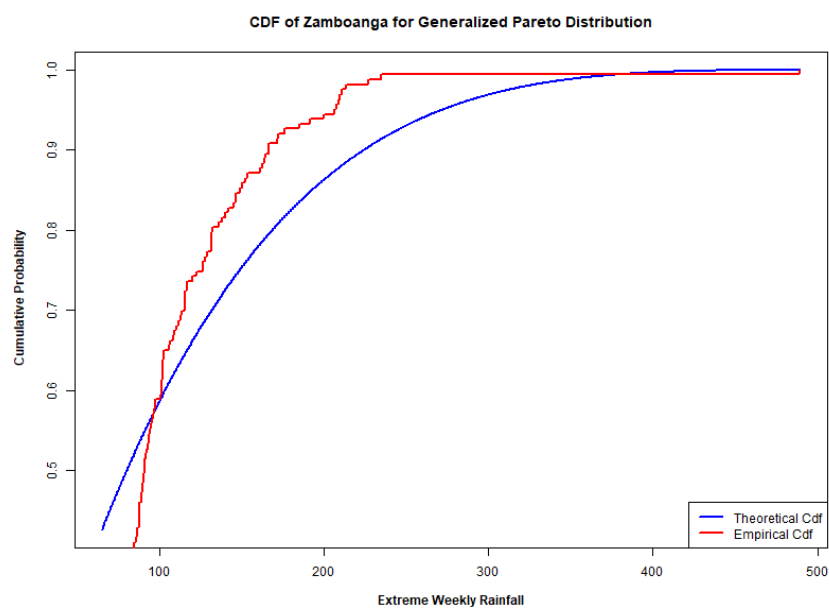


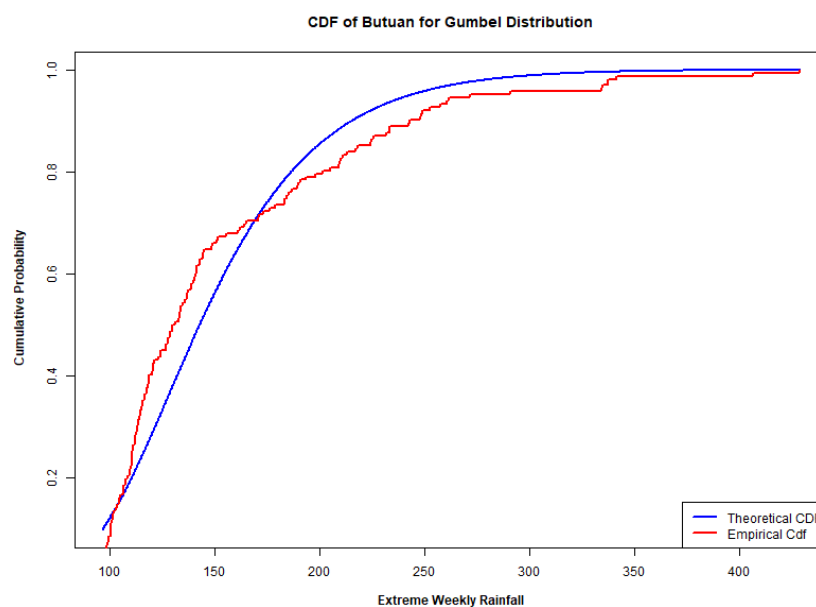
Figure E.5: CDF of Weekly Rainfall Exceeding the 75th percentile for Malaybalay, and Surigao



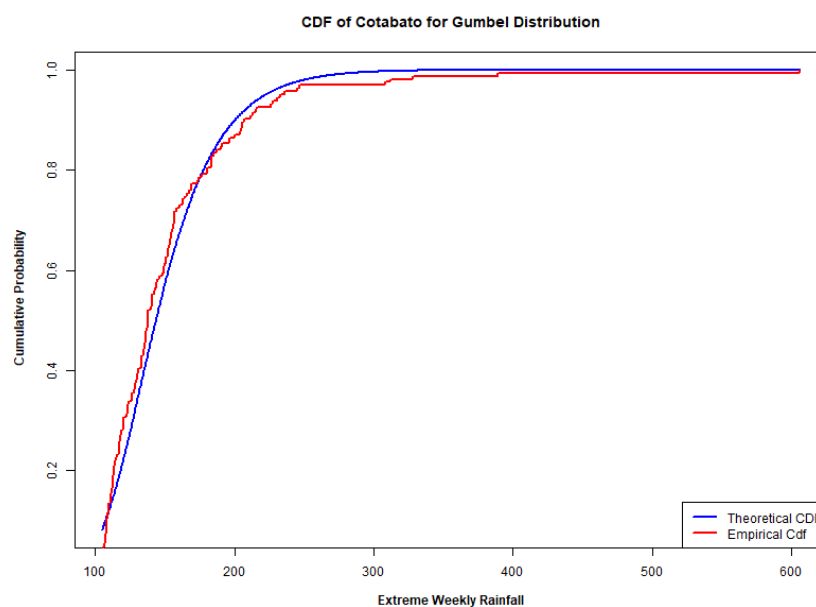
(a) Zamboanga

Figure E.6: CDF of Weekly Rainfall Exceeding the 75th percentile for Zamboanga

E.1.2 Gumbel Distribution

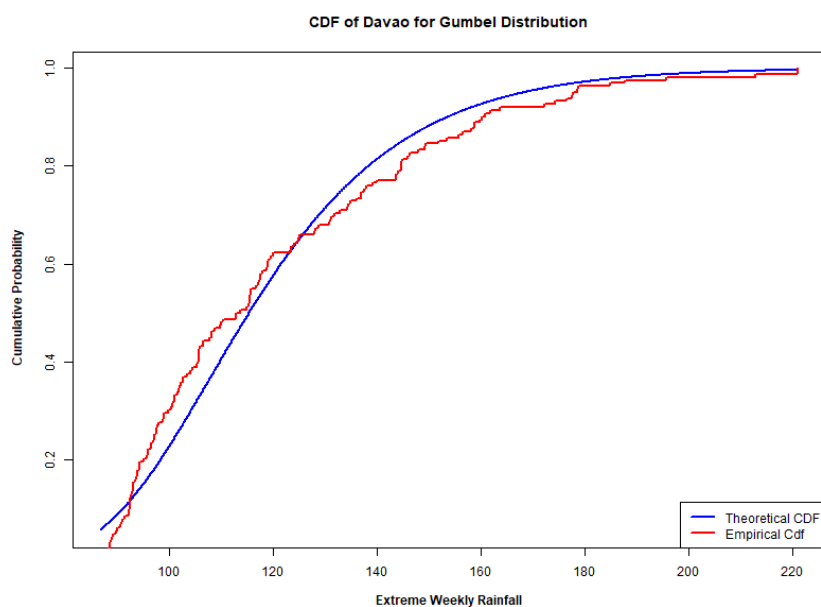


(a) Butuan

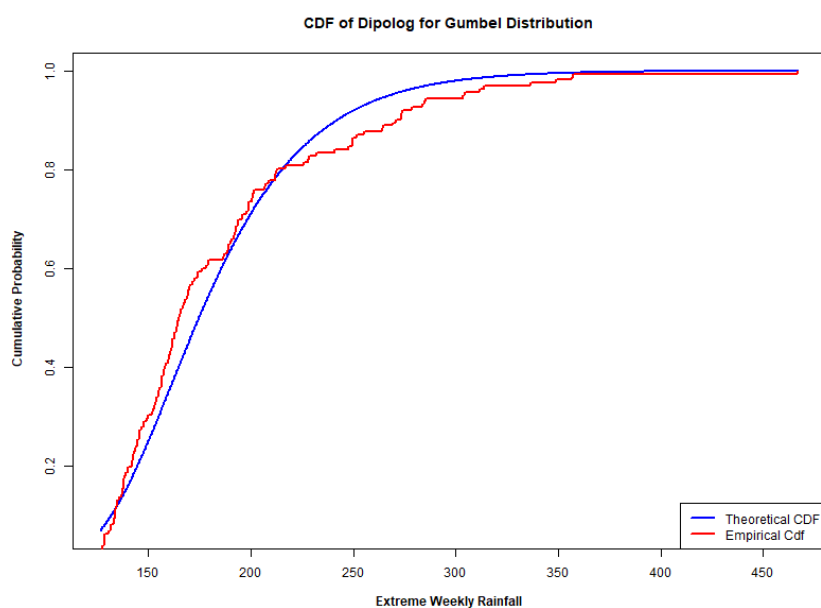


(b) Cotabato

Figure E.7: CDF of Weekly Rainfall Exceeding the 75th percentile for Butuan, and Cotabato

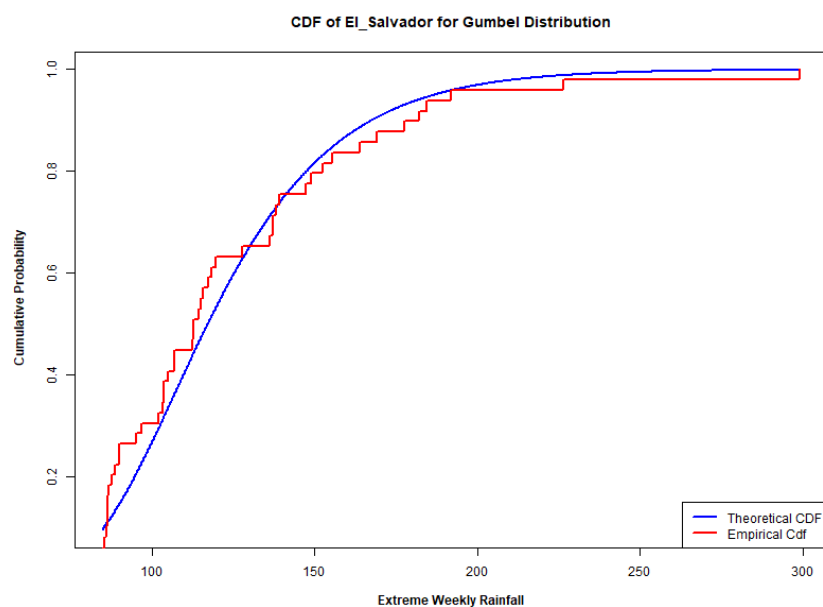


(a) Davao

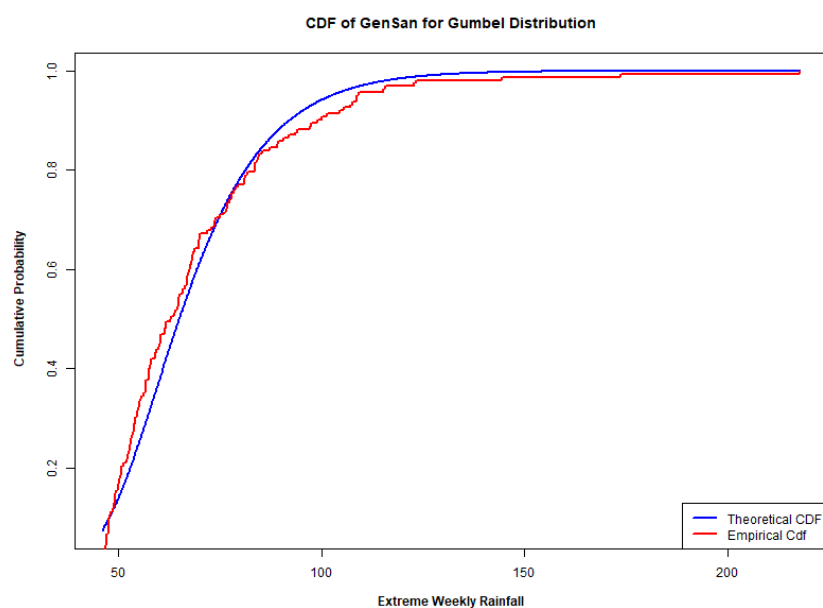


(b) Dipolog

Figure E.8: CDF of Weekly Rainfall Exceeding the 75th percentile for Davao, and Dipolog

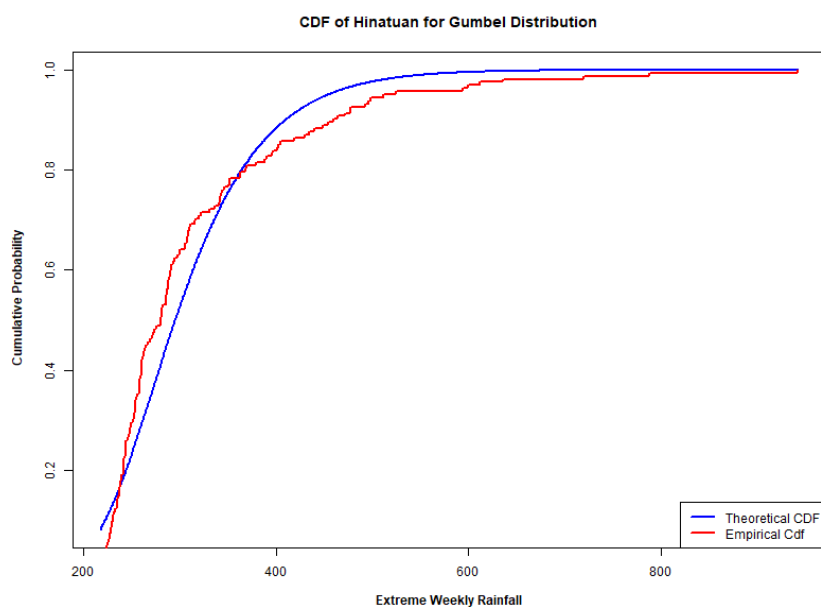


(a) El Salvador

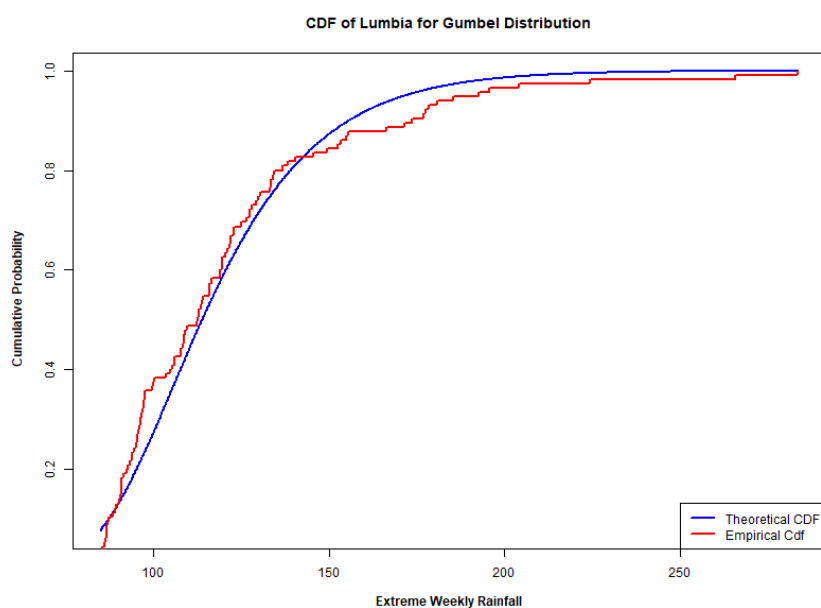


(b) General Santos

Figure E.9: CDF of Weekly Rainfall Exceeding the 75th percentile for El Salvador, and General Santos

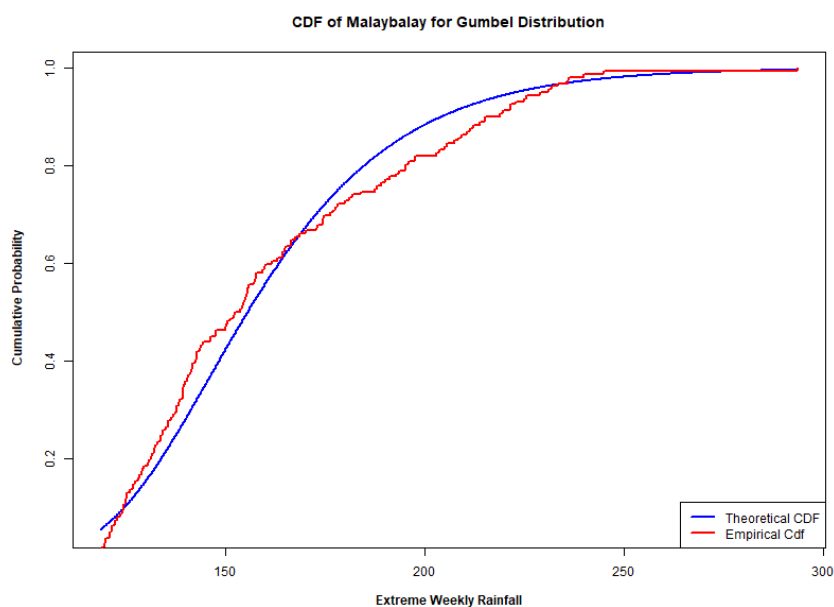


(a) Hinatuan

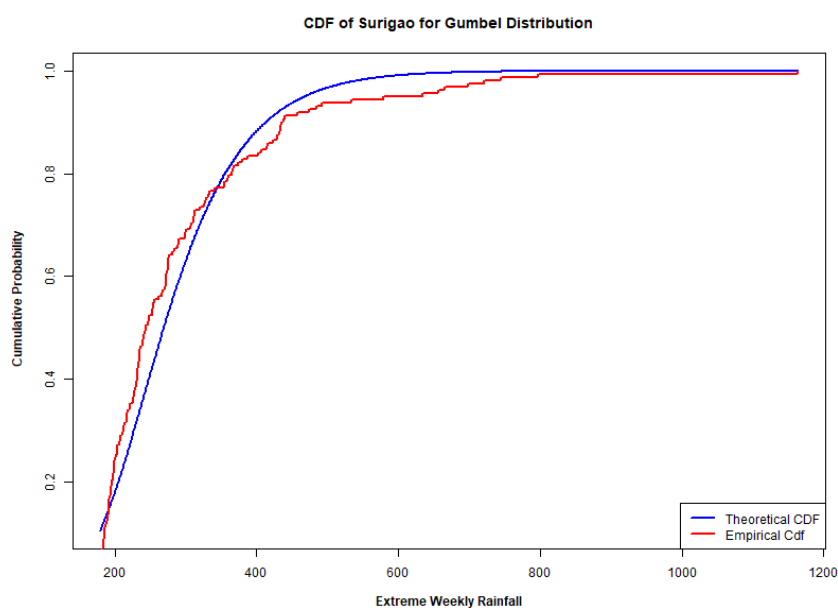


(b) Lumbia

Figure E.10: CDF of Weekly Rainfall Exceeding the 75th percentile for Hinatuan, and Lumbia

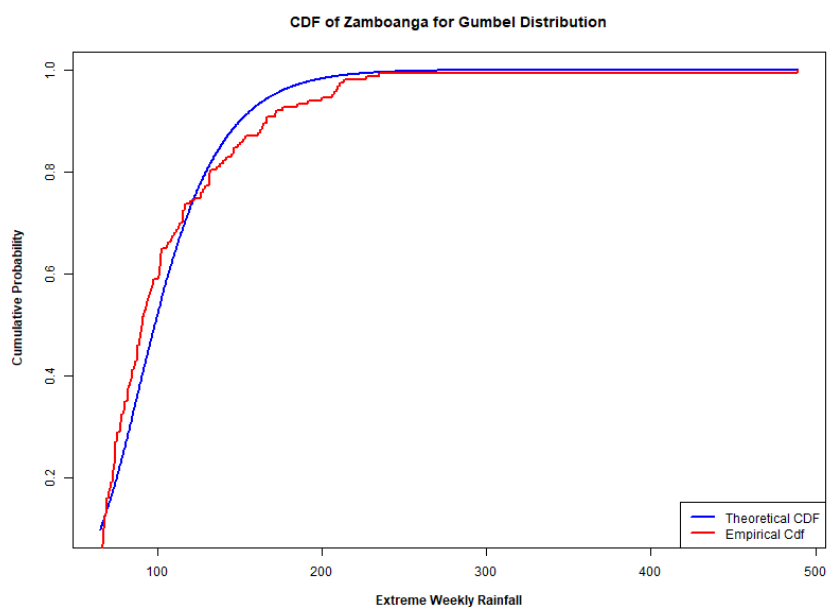


(a) Malaybalay



(b) Surigao

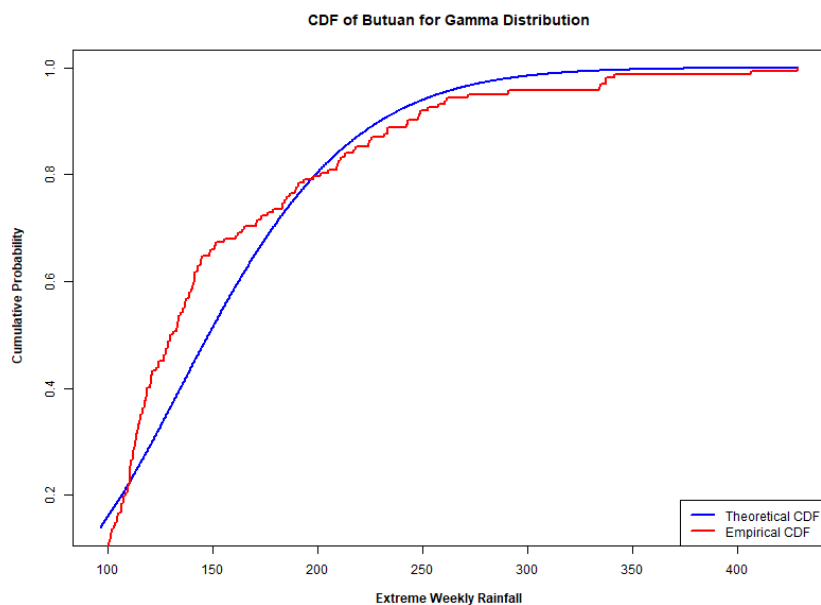
Figure E.11: CDF of Weekly Rainfall Exceeding the 75th percentile for Malaybalay, and Surigao



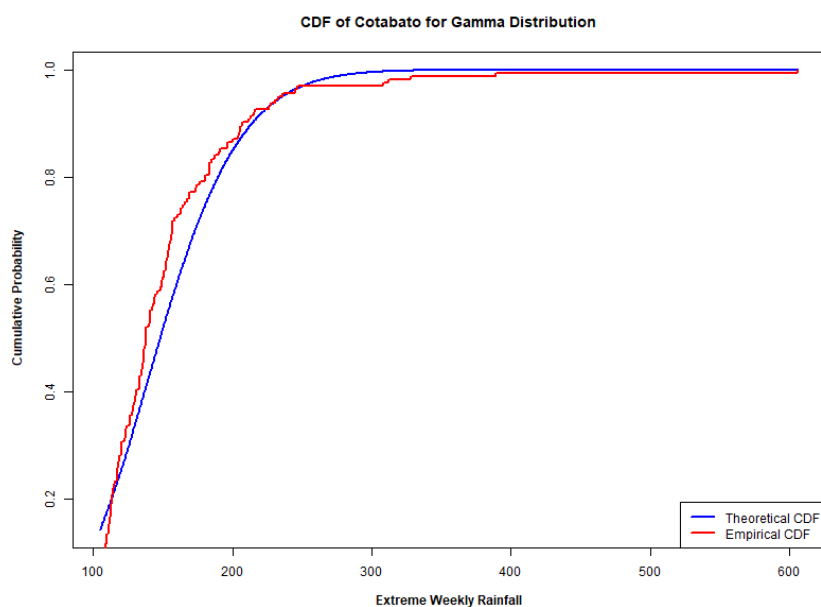
(a) Zamboanga

Figure E.12: CDF of Weekly Rainfall Exceeding the 75th percentile for Zamboanga

E.1.3 Gamma Distribution

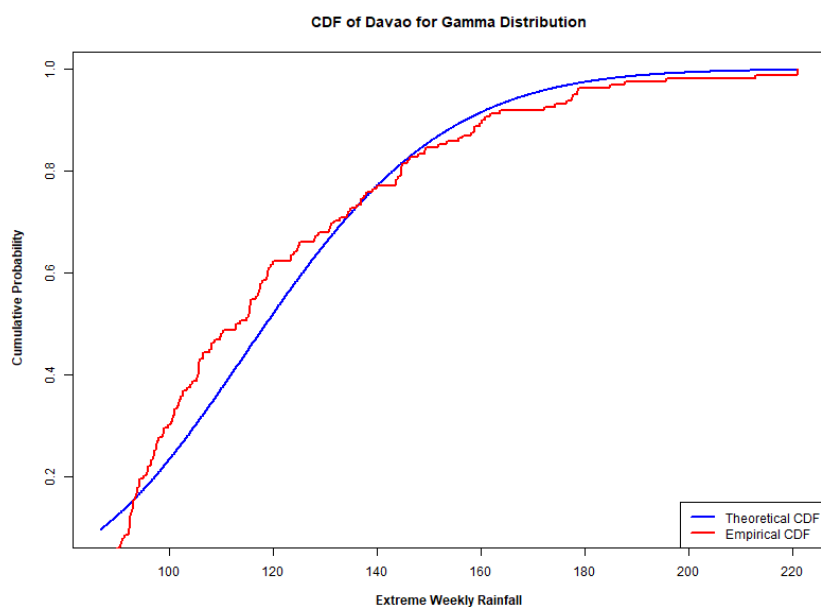


(a) Butuan

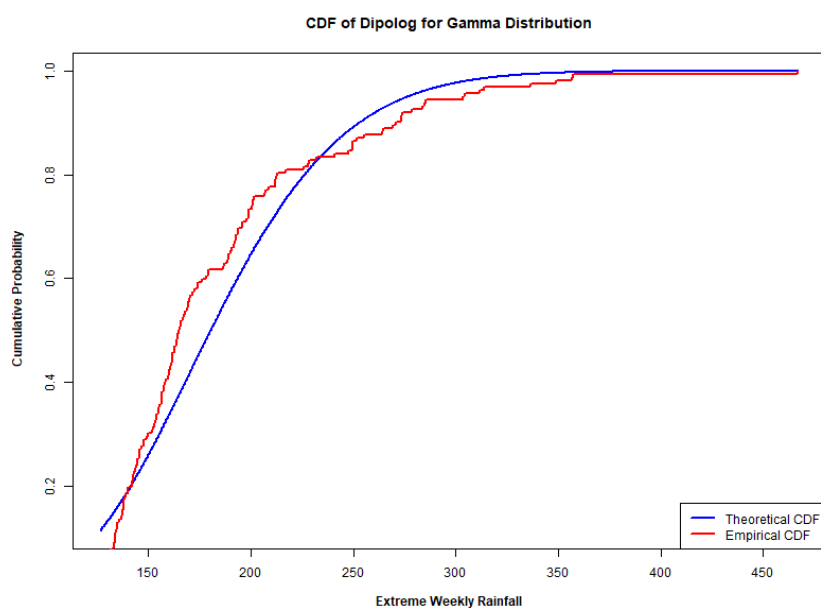


(b) Cotabato

Figure E.13: CDF of Weekly Rainfall Exceeding the 75th percentile for Butuan, and Cotabato

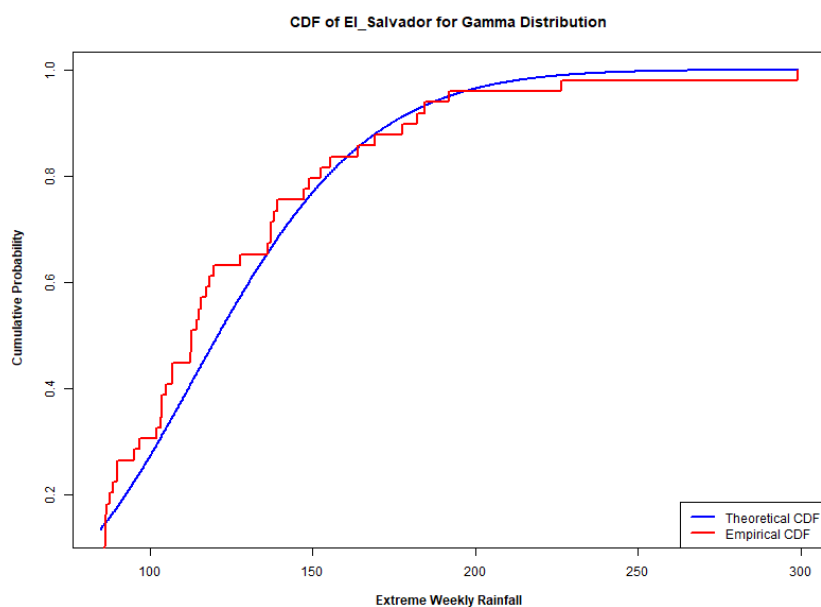


(a) Davao

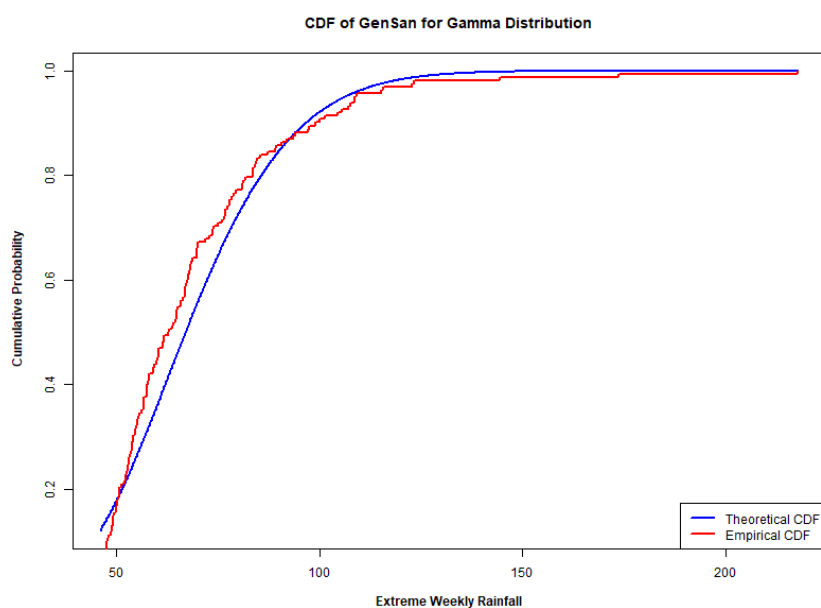


(b) Dipolog

Figure E.14: CDF of Weekly Rainfall Exceeding the 75th percentile for Davao, and Dipolog

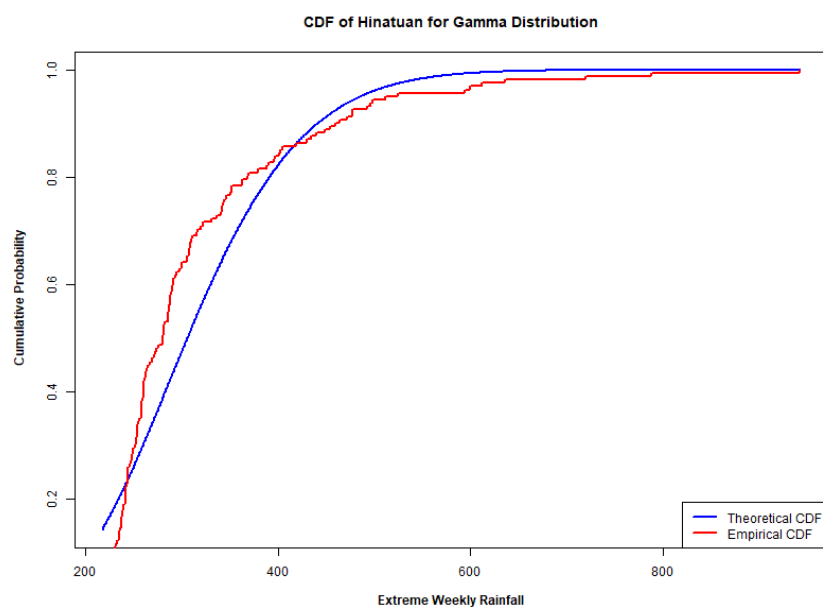


(a) El Salvador

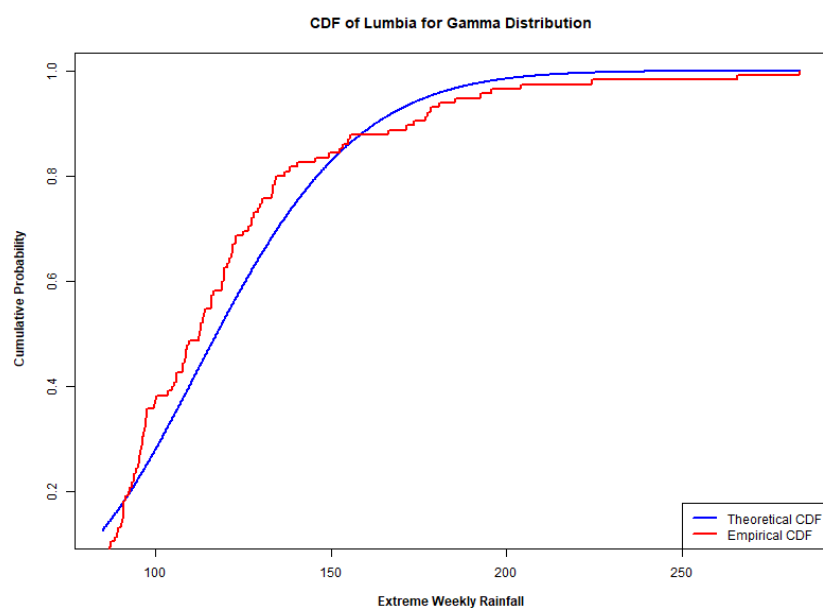


(b) General Santos

Figure E.15: CDF of Weekly Rainfall Exceeding the 75th percentile for El Salvador, and General Santos

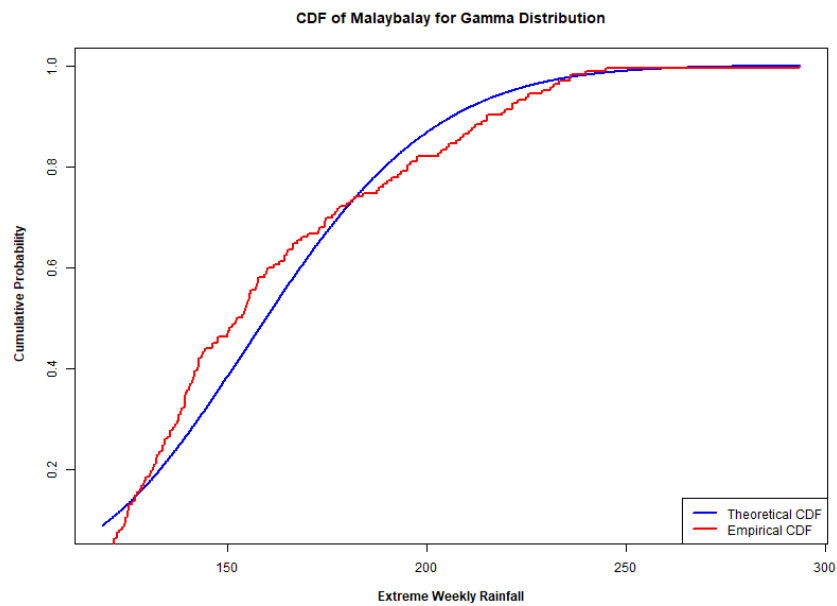


(a) Hinatuan

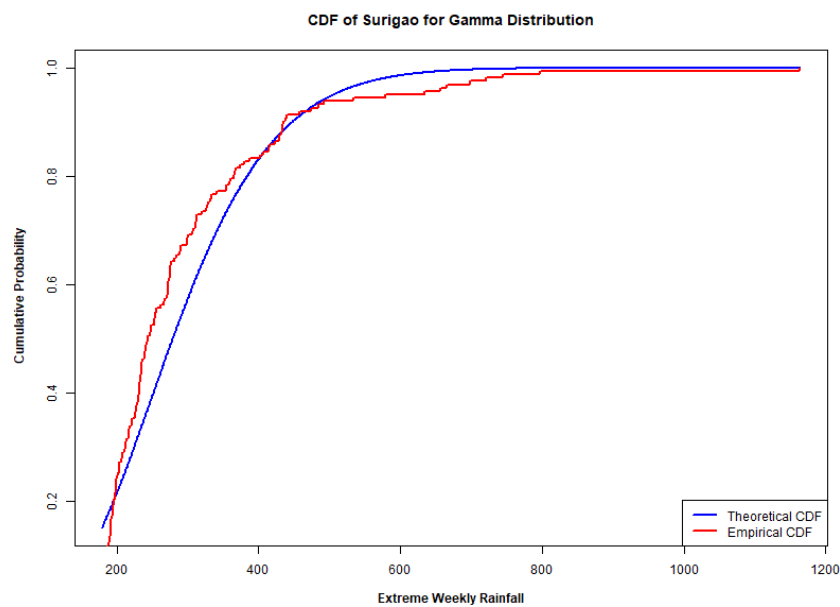


(b) Lumbia

Figure E.16: CDF of Weekly Rainfall Exceeding the 75th percentile for Hinatuan, and Lumbia

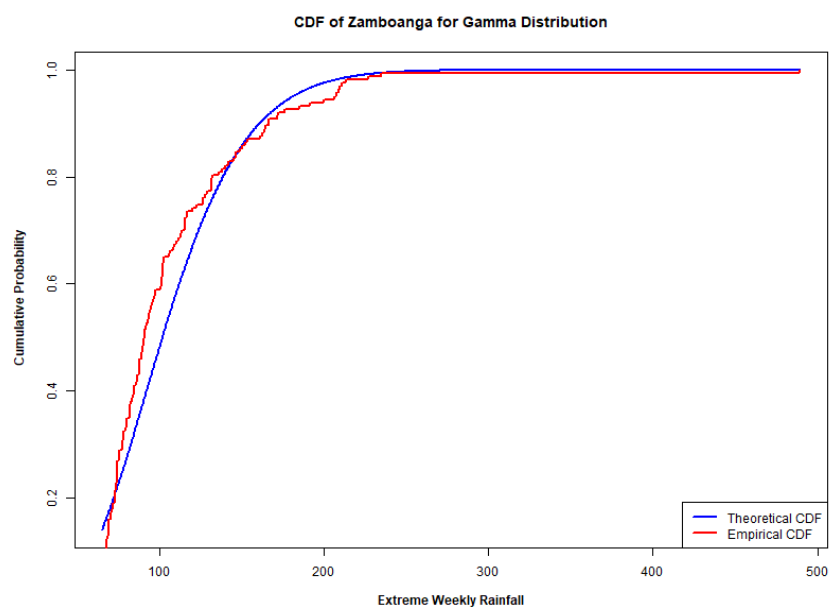


(a) Malaybalay



(b) Surigao

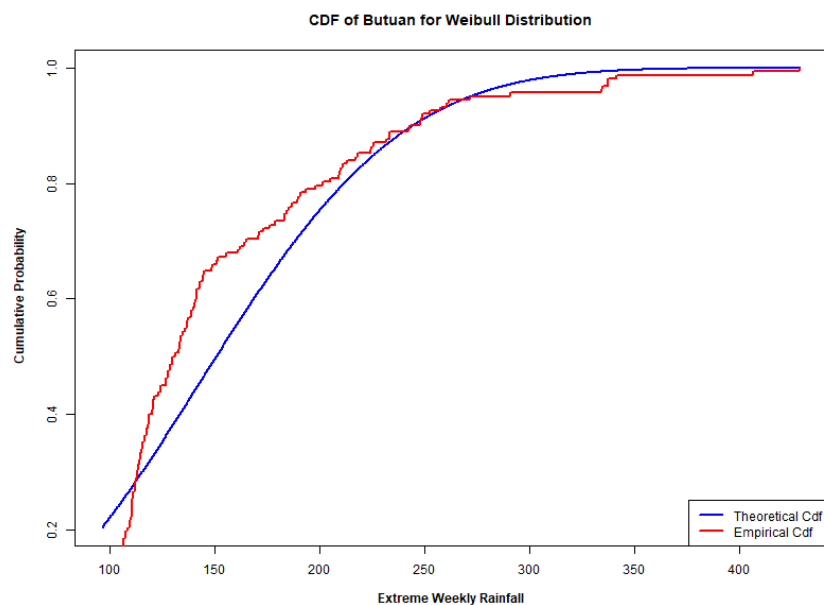
Figure E.17: CDF of Weekly Rainfall Exceeding the 75th percentile for Malaybalay, and Surigao



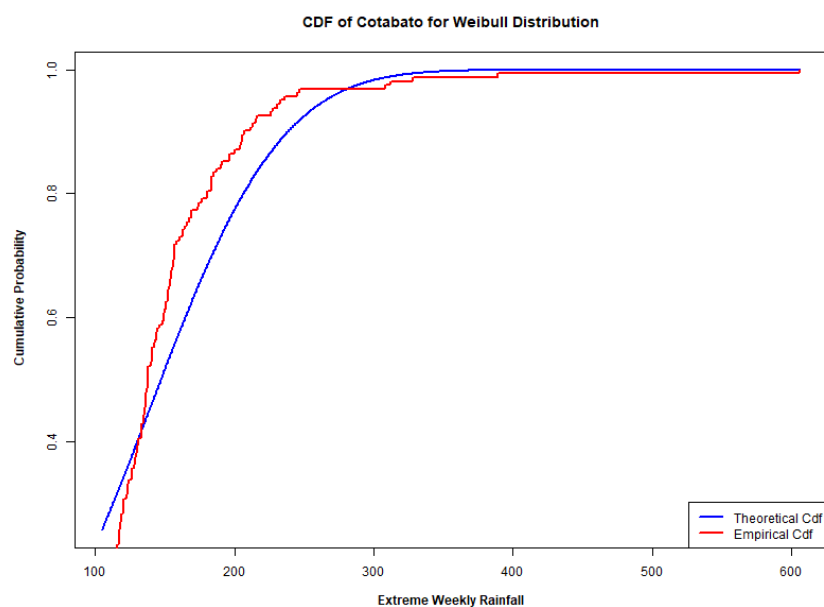
(a) Zamboanga

Figure E.18: CDF of Weekly Rainfall Exceeding the 75th percentile for Zamboanga

E.1.4 Weibull Distribution

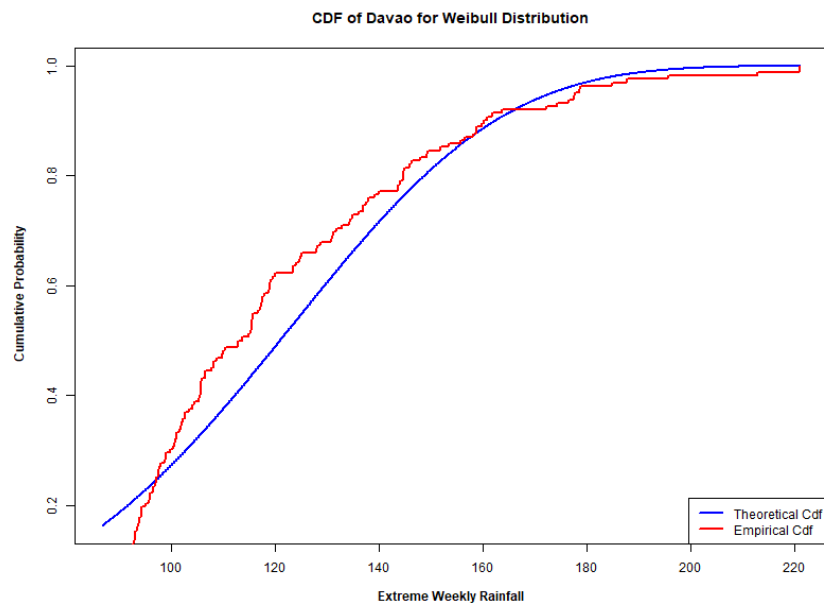


(a) Butuan

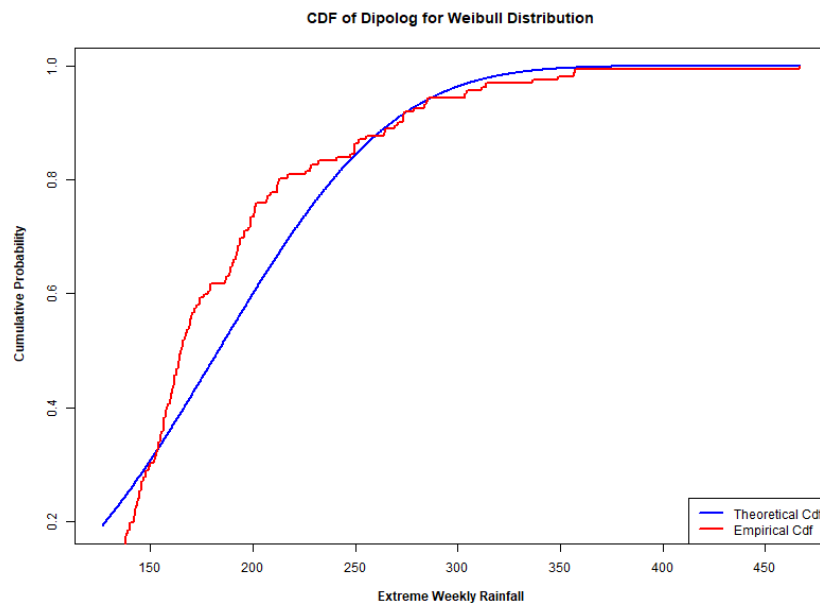


(b) Cotabato

Figure E.19: CDF of Weekly Rainfall Exceeding the 75th percentile for Butuan, and Cotabato

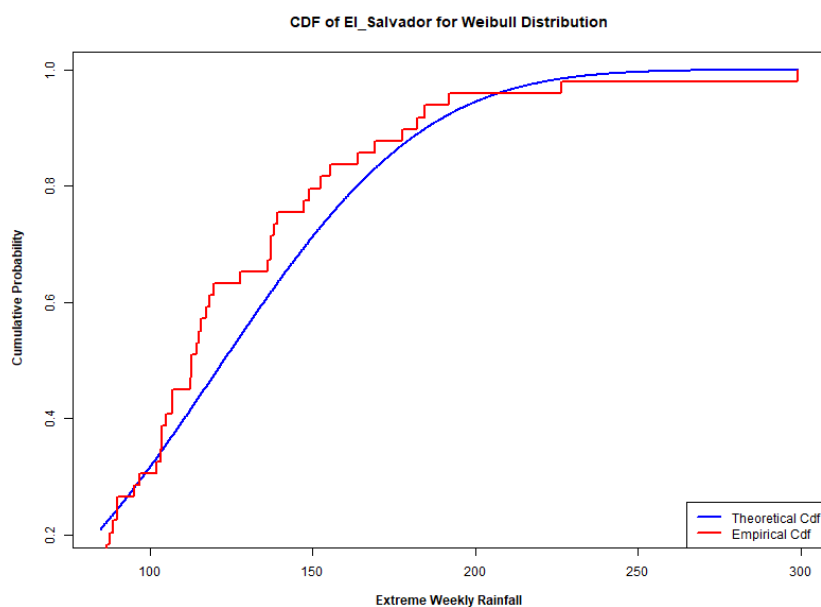


(a) Davao

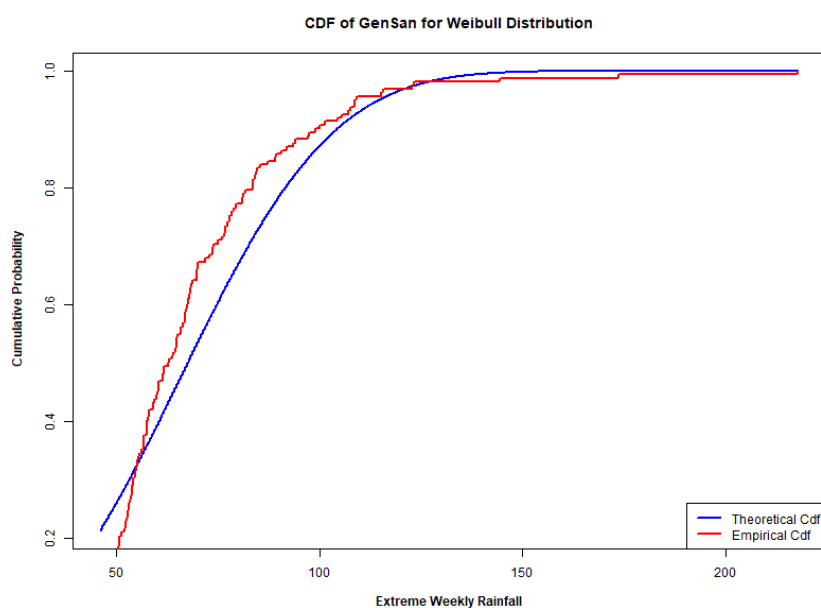


(b) Dipolog

Figure E.20: CDF of Weekly Rainfall Exceeding the 75th percentile for Davao, and Dipolog

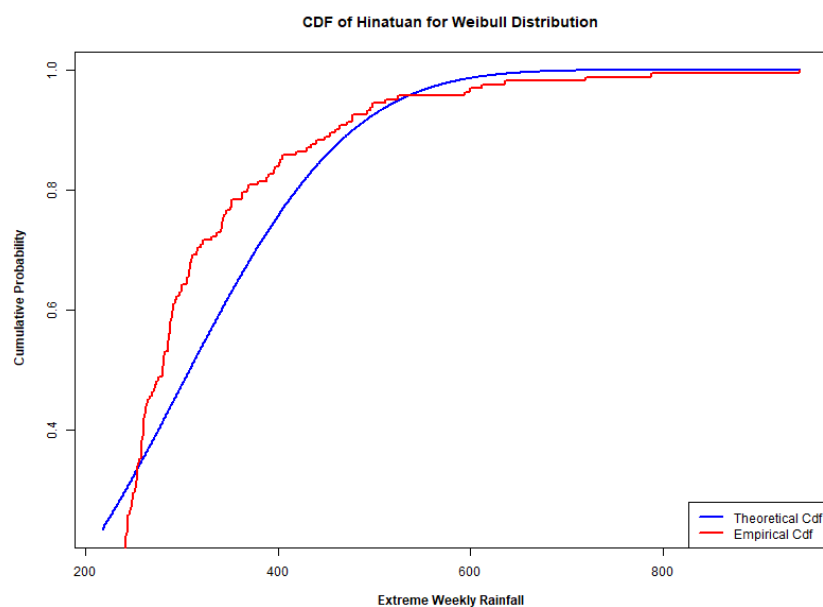


(a) El Salvador

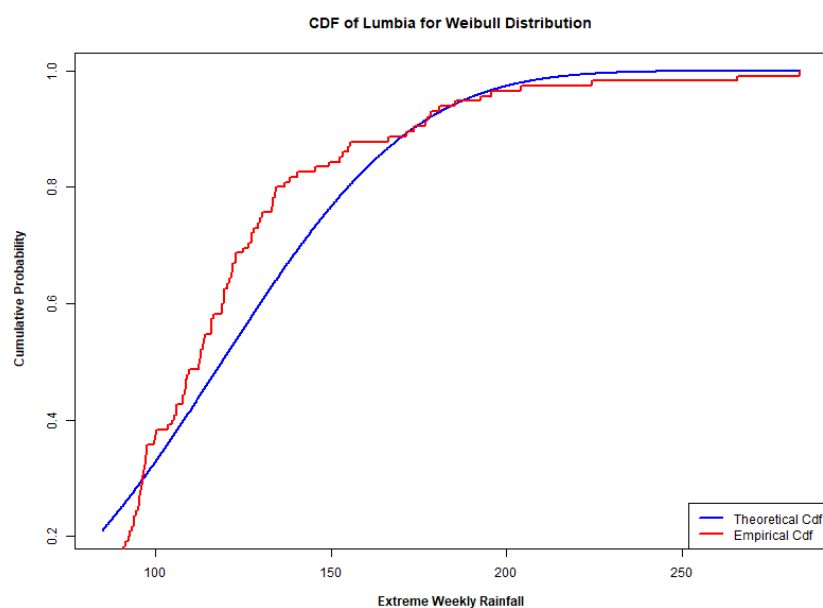


(b) General Santos

Figure E.21: CDF of Weekly Rainfall Exceeding the 75th percentile for El Salvador, and General Santos

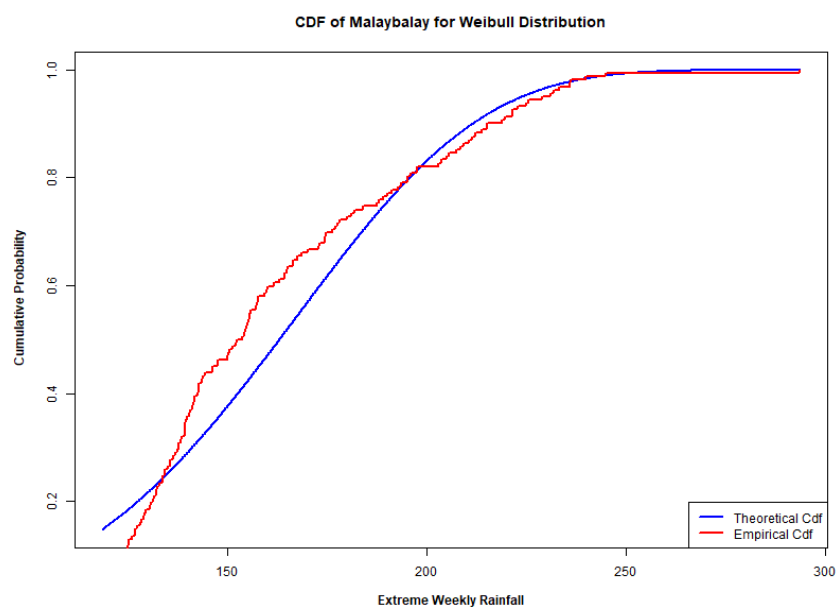


(a) Hinatuan

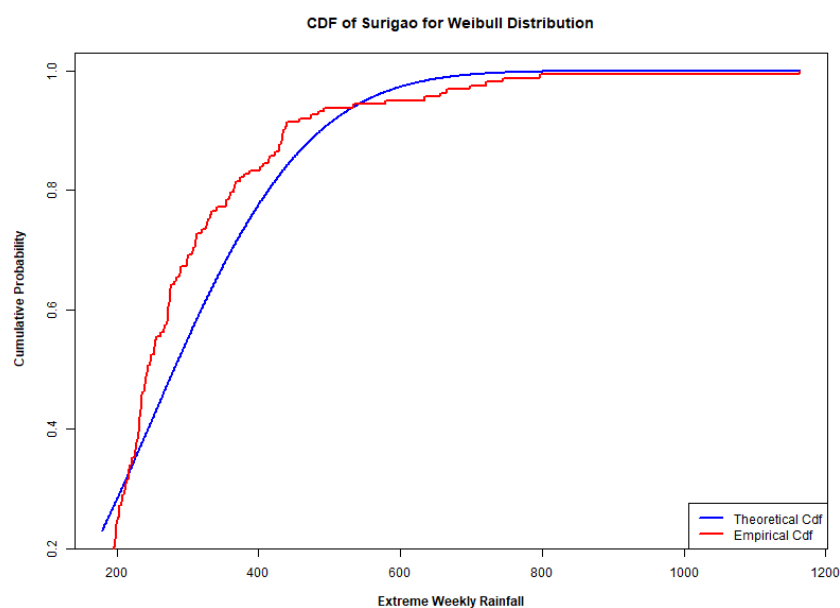


(b) Lumbia

Figure E.22: CDF of Weekly Rainfall Exceeding the 75th percentile for Hinatuan, and Lumbia

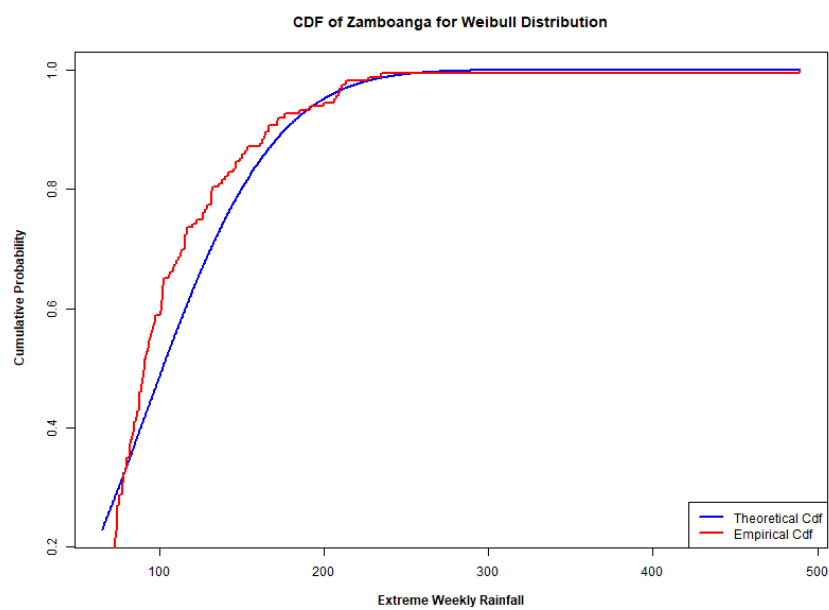


(a) Malaybalay



(b) Surigao

Figure E.23: CDF of Weekly Rainfall Exceeding the 75th percentile for Malaybalay, and Surigao



(a) Zamboanga

Figure E.24: CDF of Weekly Rainfall Exceeding the 75th percentile for Zamboanga

APPENDIX F

MONTHLY RAINFALL EXCEEDING THE 75th PERCENTILE

This appendix presents the cumulative probability distributions for monthly rainfall exceeding the 75th percentile. The analysis in Chapter 4 Table 4.13 focuses on the Generalized Extreme-Value (GEV) distribution for ten stations and the Gamma distribution for one station in El Salvador. These additional results are provided for further exploration and comparison.

F.1 Cumulative Probability Distribution

This section illustrates the cumulative probability distribution (CDF) of monthly rainfall exceeding 75th percentile for the five (5) distributions fitted in the study.

F.1.1 Generalized Pareto Distribution

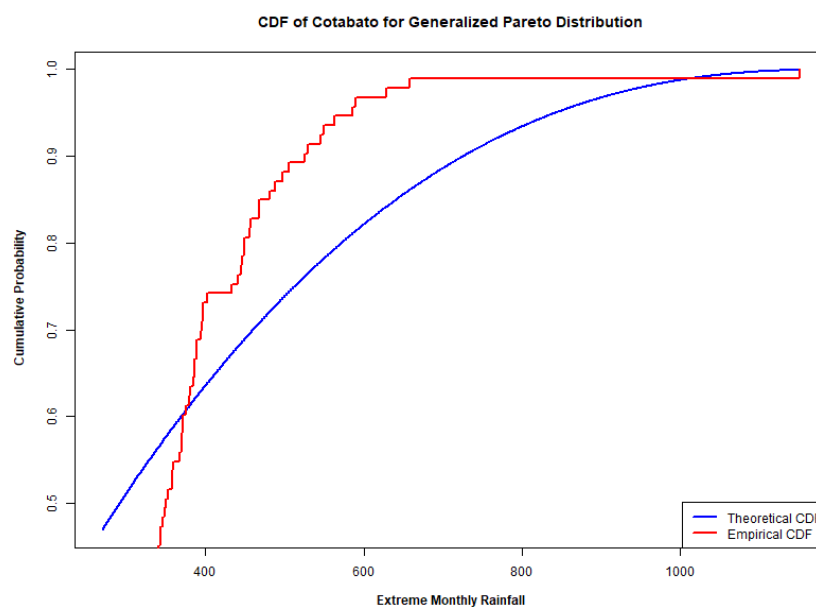
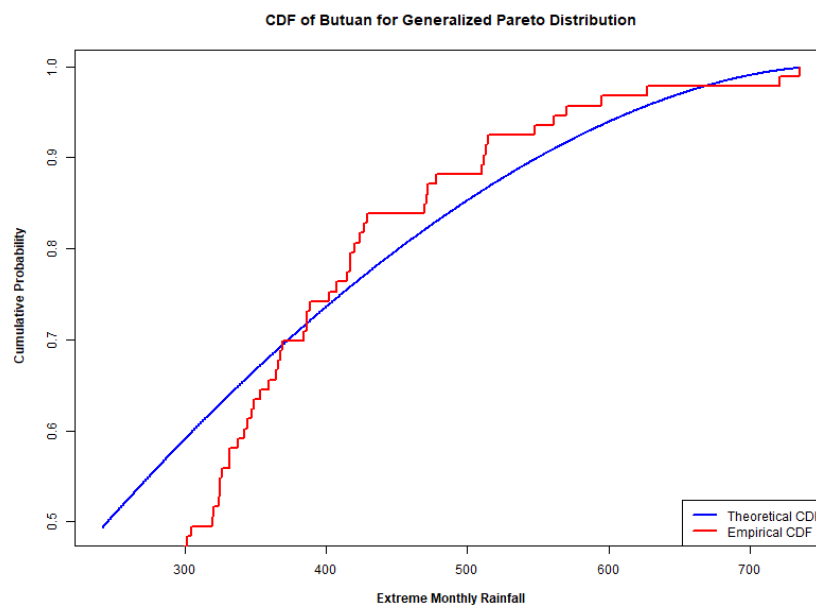


Figure F.1: CDF of Monthly Rainfall Exceeding the 75th Percentile for Butuan, and Cotabato

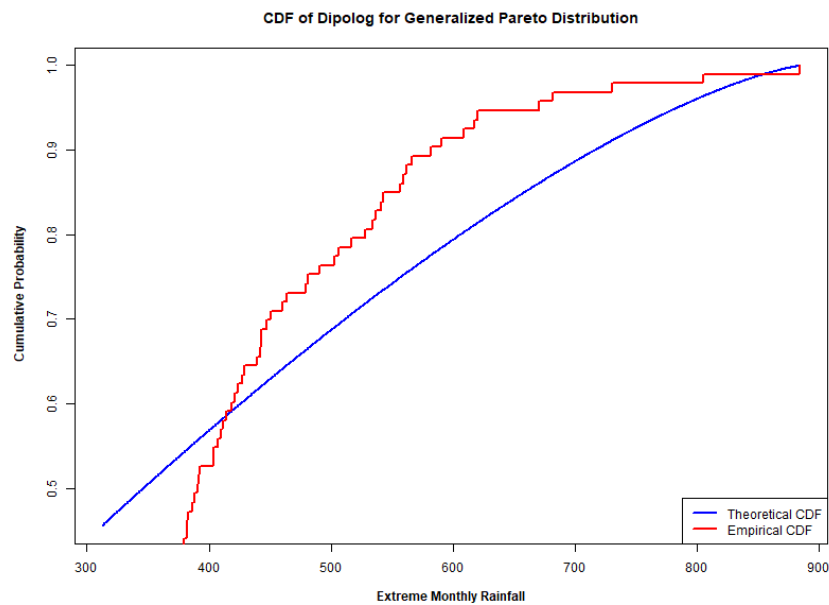
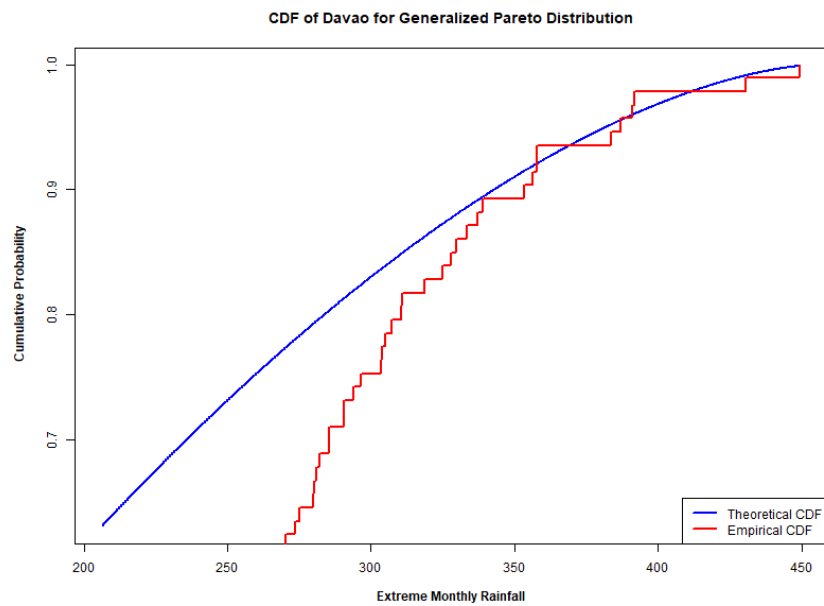
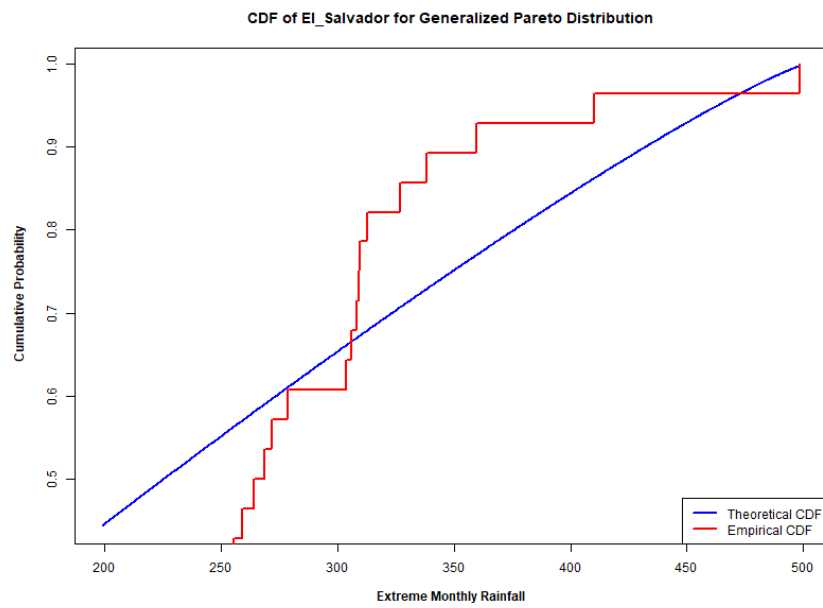
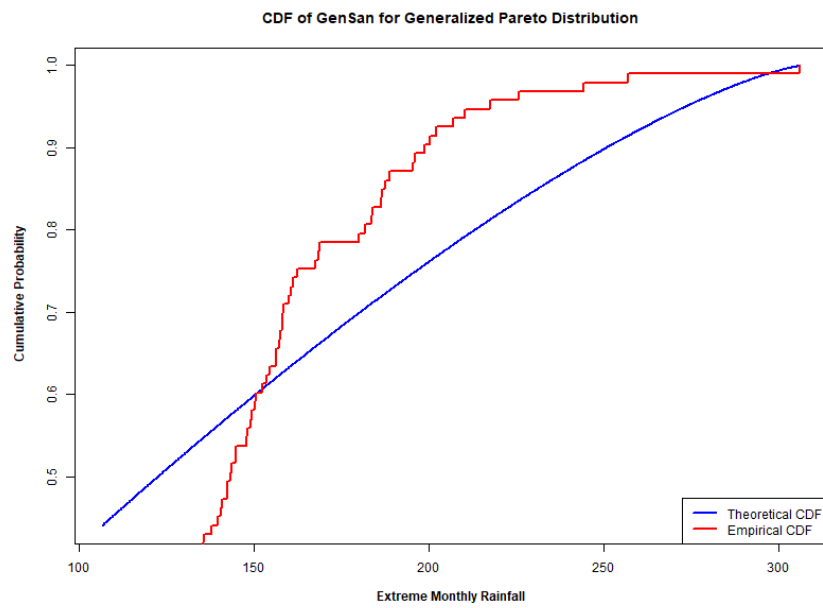


Figure F.2: CDF of Monthly Rainfall Exceeding the 75th Percentile for Davao, and Dipolog

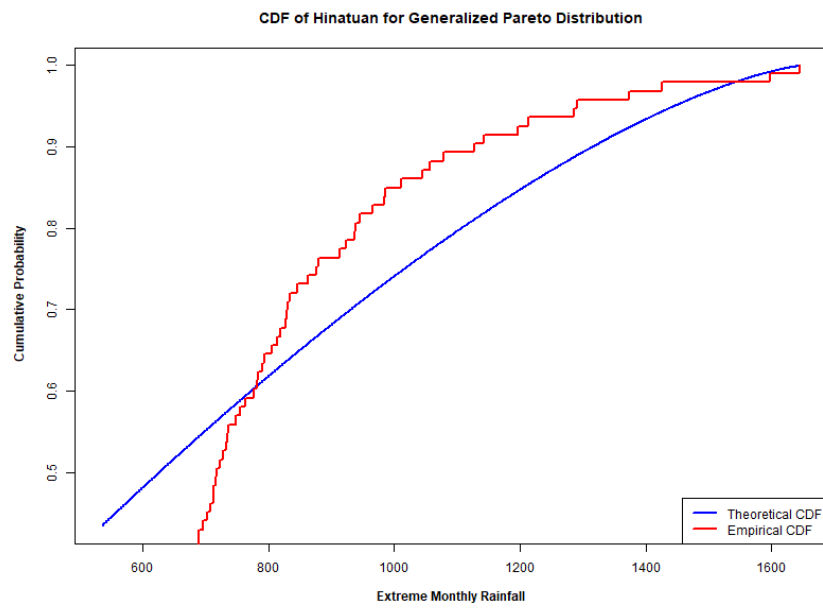


(a) El Salvador

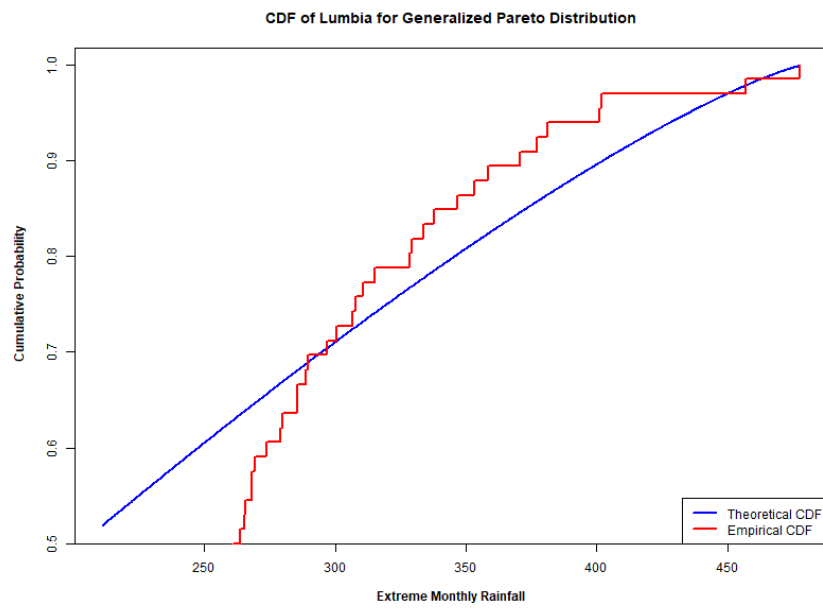


(b) General Santos

Figure F.3: CDF of Monthly Rainfall Exceeding the 75th Percentile for El Salvador, and General Santos

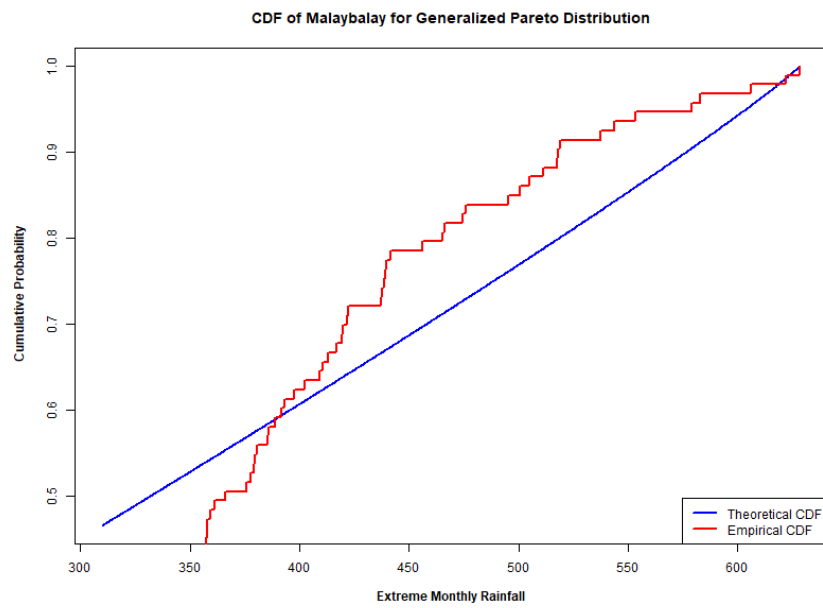


(a) Hinatuan

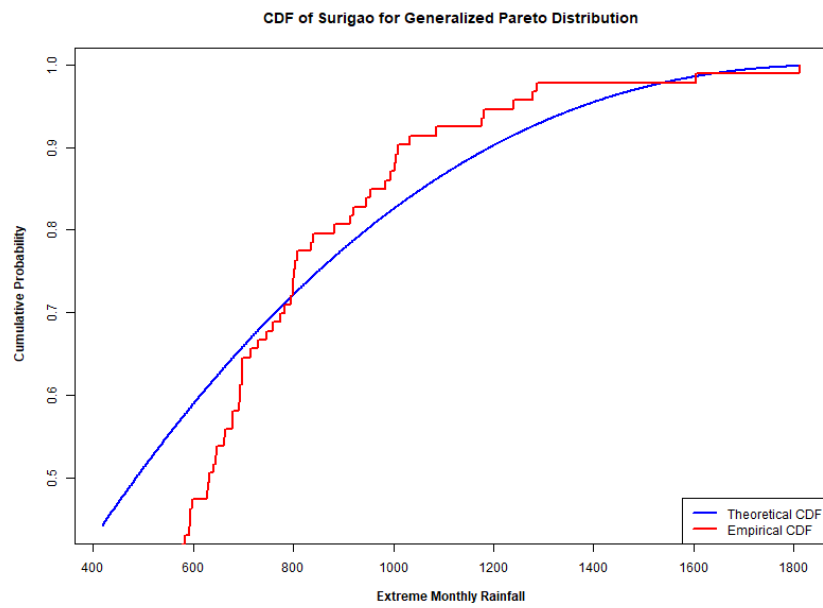


(b) Lumbia

Figure F.4: CDF of Monthly Rainfall Exceeding the 75th Percentile for Hinatuan, and Lumbia

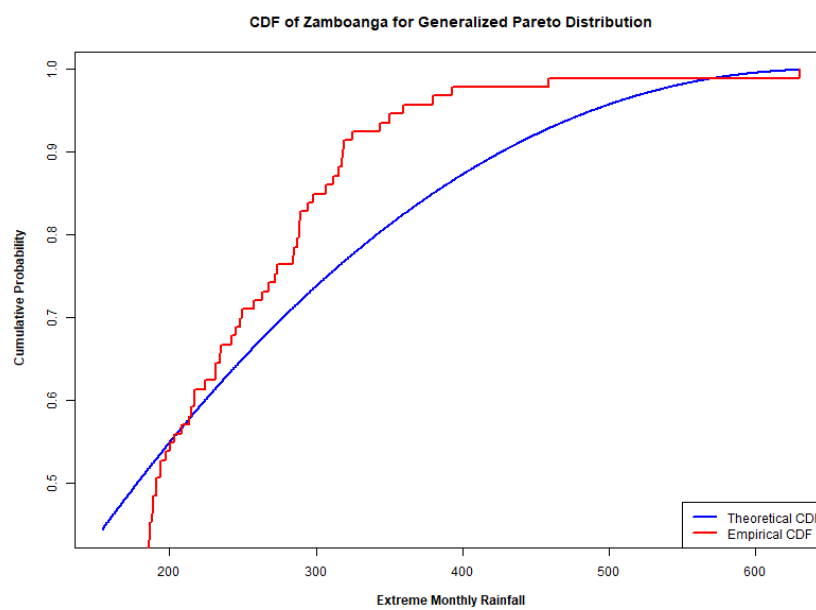


(a) Malaybalay



(b) Surigao

Figure F.5: CDF of Monthly Rainfall Exceeding the 75th Percentile for Malaybalay, and Surigao



(a) Zamboanga

Figure F.6: CDF of Monthly Rainfall Exceeding the 75th Percentile for Zamboanga

F.1.2 Generalized Extreme-Value

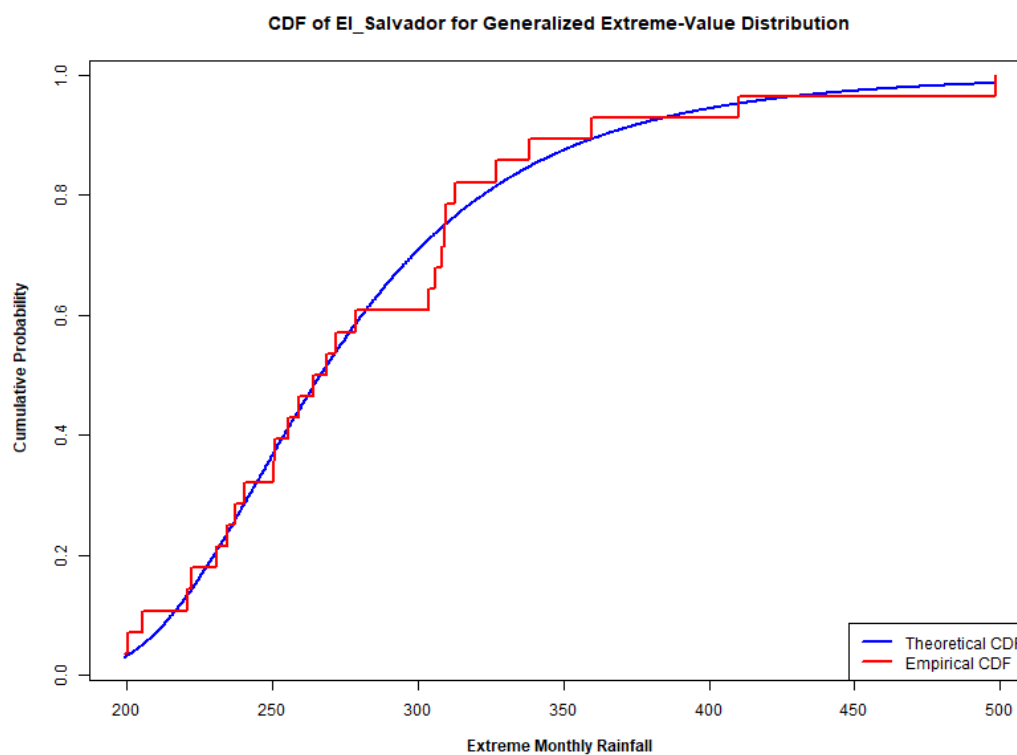
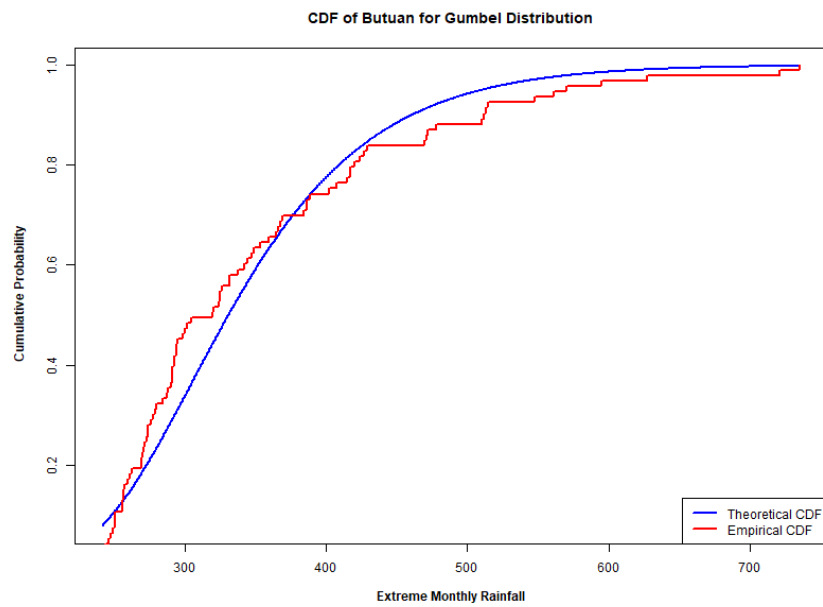
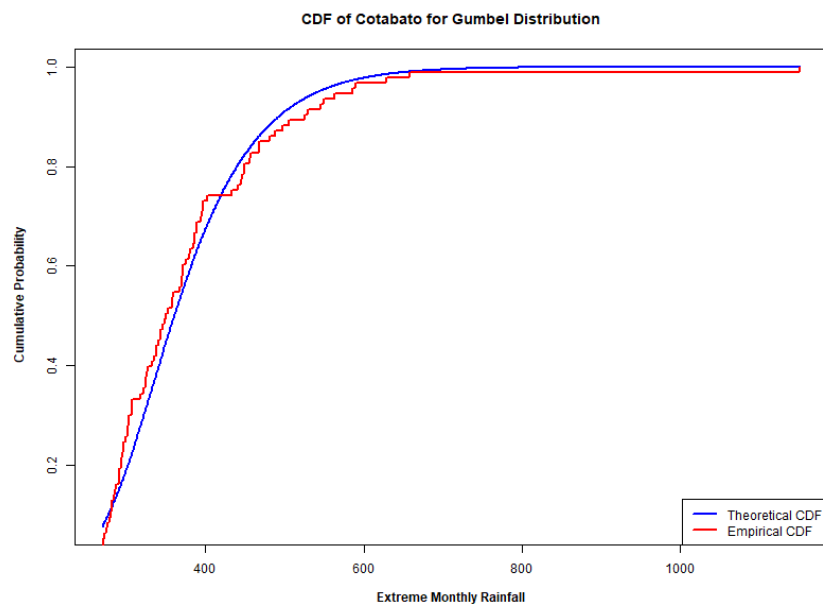


Figure F.7: CDF of Monthly Rainfall Exceeding the 75th Percentile for El Salvador

F.1.3 Gumbel Distribution

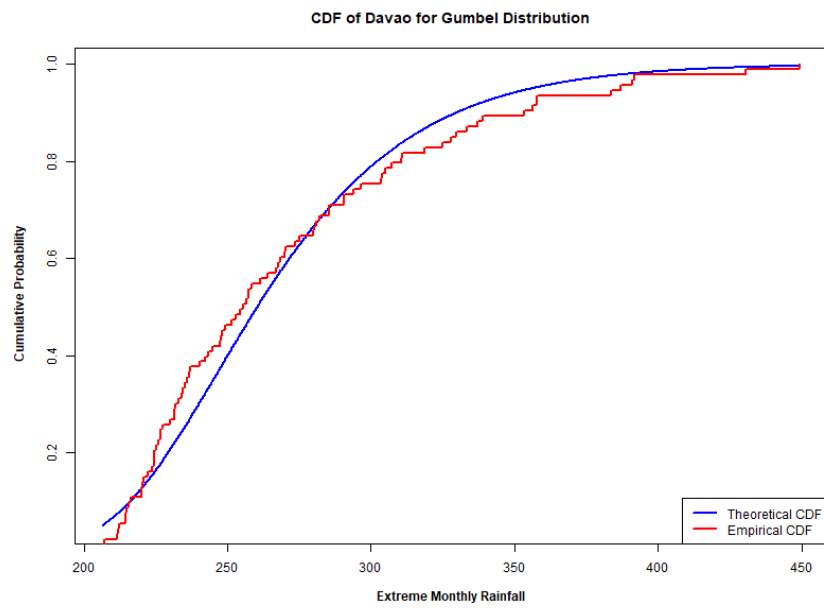


(a) Butuan

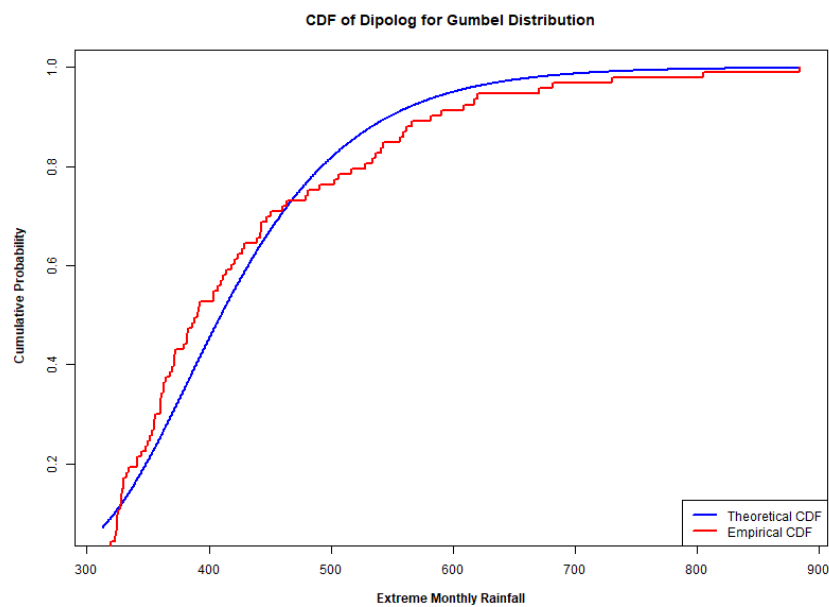


(b) Cotabato

Figure F.8: CDF of Monthly Rainfall Exceeding the 75th Percentile for Butuan, and Cotabato

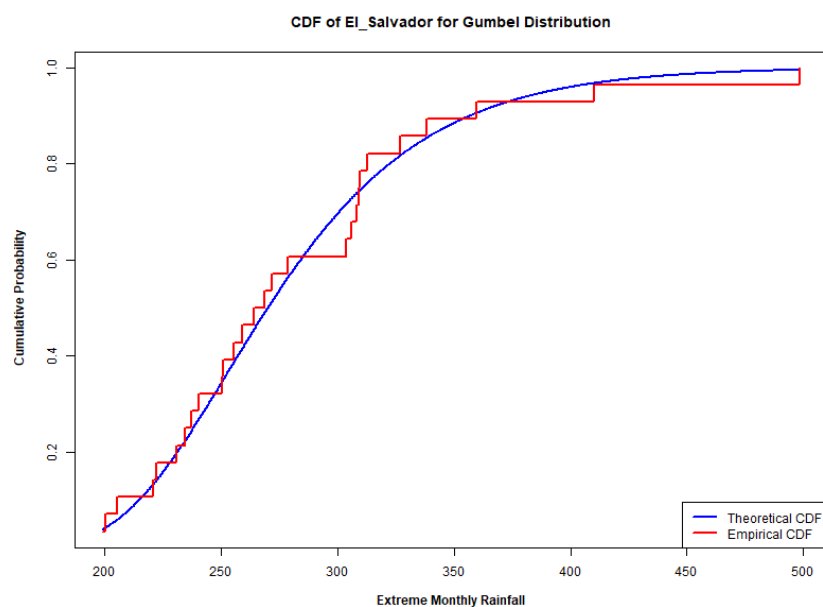


(a) Davao

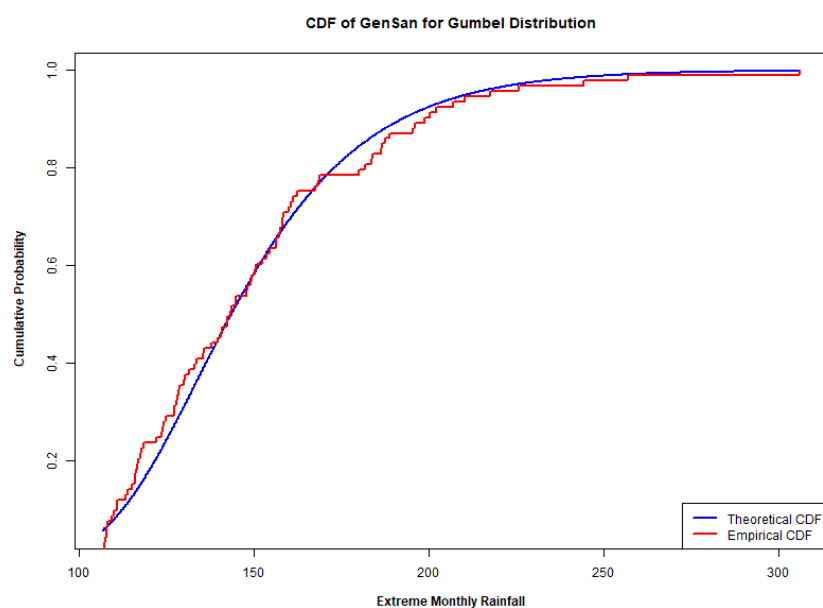


(b) Dipolog

Figure F.9: CDF of Monthly Rainfall Exceeding the 75th Percentile for Davao, and Dipolog

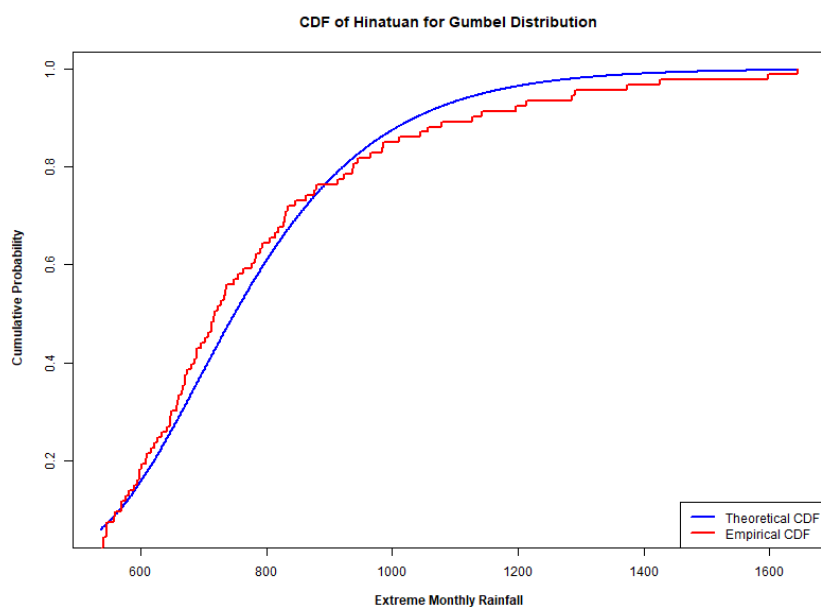


(a) El Salvador

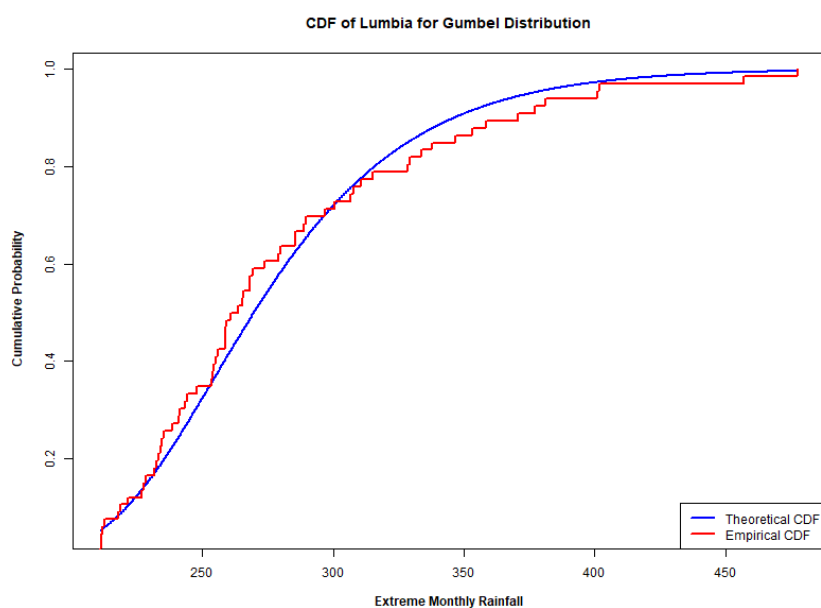


(b) General Santos

Figure F.10: CDF of Monthly Rainfall Exceeding the 75th Percentile for El Salvador, and General Santos

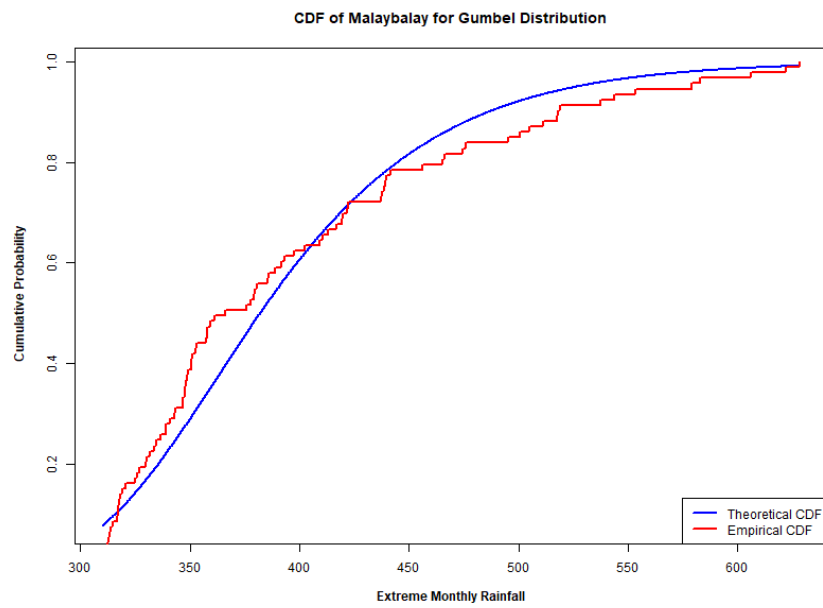


(a) Hinatuan

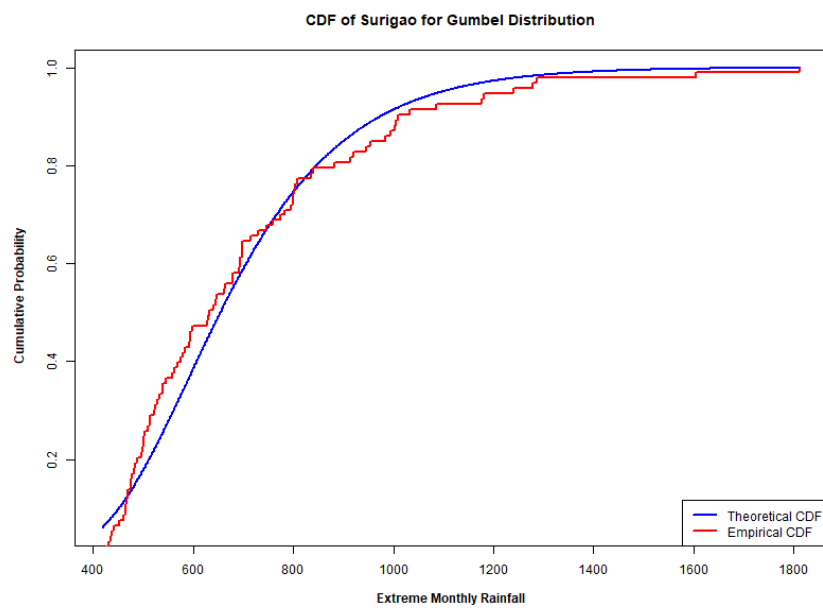


(b) Lumbia

Figure F.11: CDF of Monthly Rainfall Exceeding the 75th Percentile for Hinatuan, and Lumbia

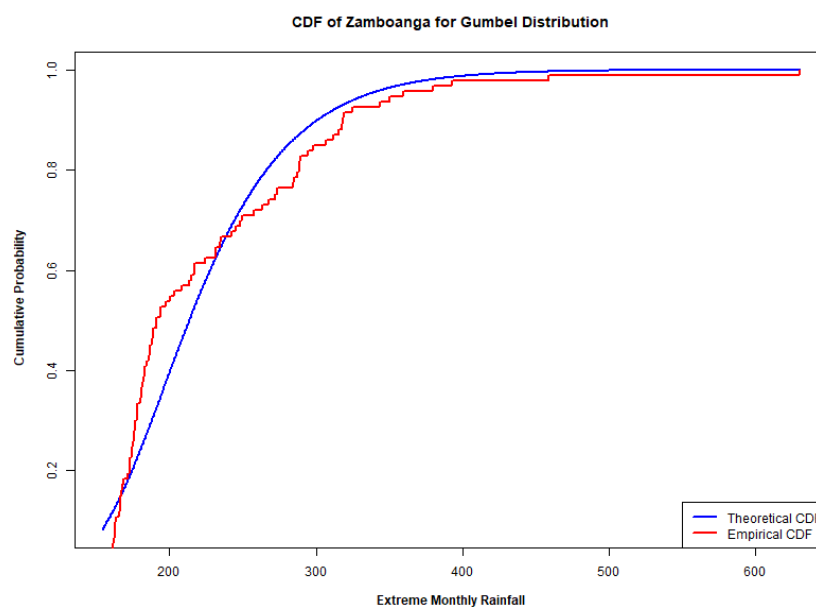


(a) Malaybalay



(b) Surigao

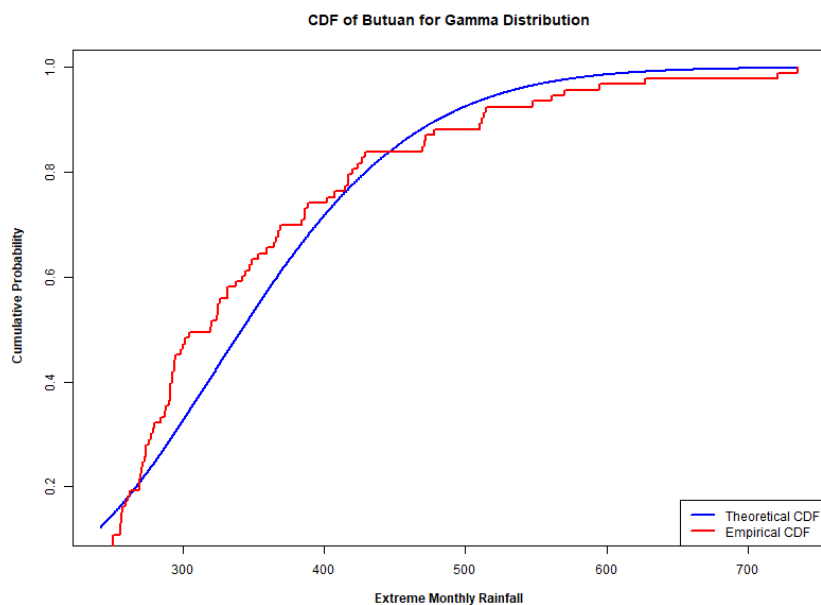
Figure F.12: CDF of Monthly Rainfall Exceeding the 75th Percentile for Malaybalay, and Surigao



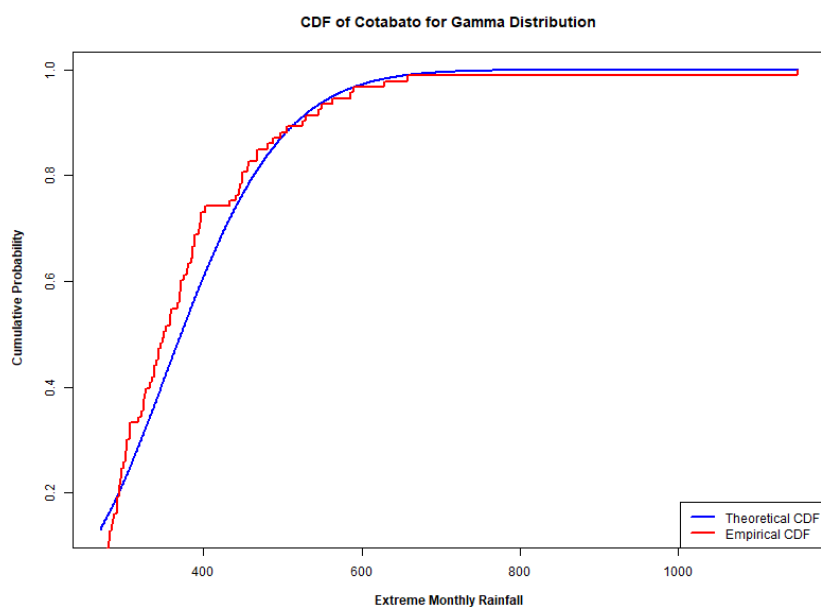
(a) Zamboanga

Figure F.13: CDF of Monthly Rainfall Exceeding the 75th Percentile for Zamboanga

F.1.4 Gamma Distribution

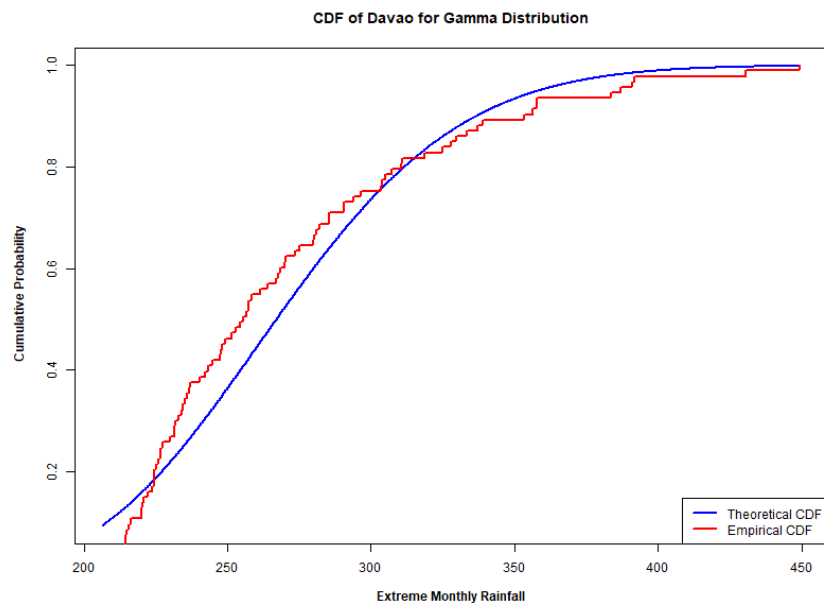


(a) Butuan

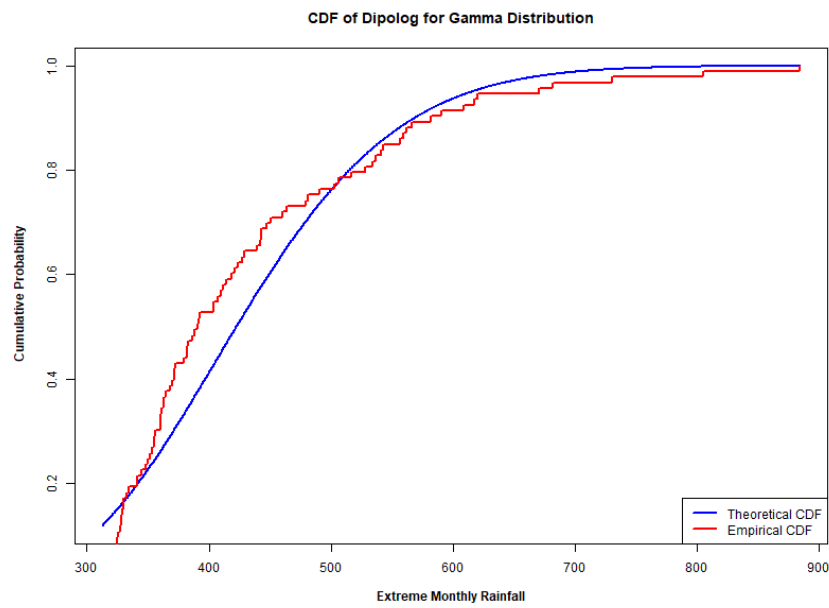


(b) Cotabato

Figure F.14: CDF of Monthly Rainfall Exceeding the 75th Percentile Butuan, and Cotabato

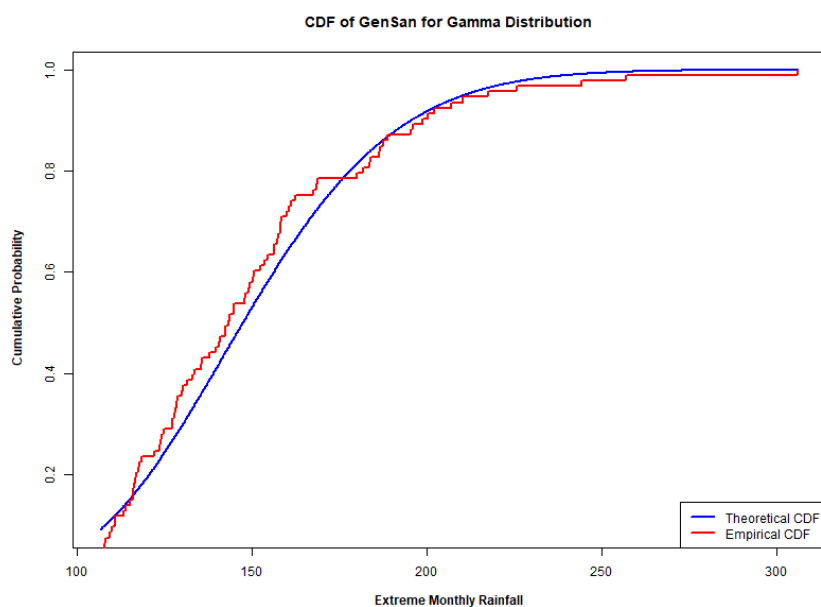


(a) Davao

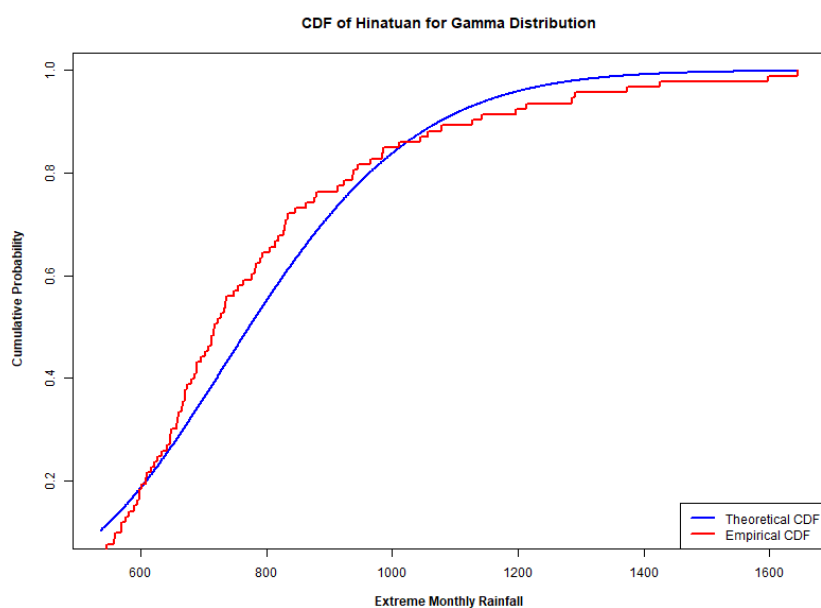


(b) Dipolog

Figure F.15: CDF of Monthly Rainfall Exceeding the 75th Percentile for Davao, and Dipolog

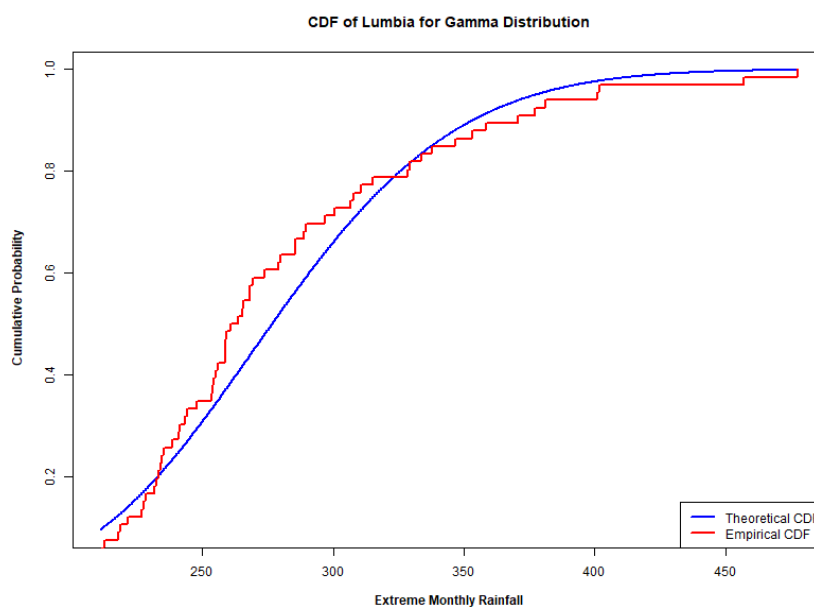


(a) General Santos

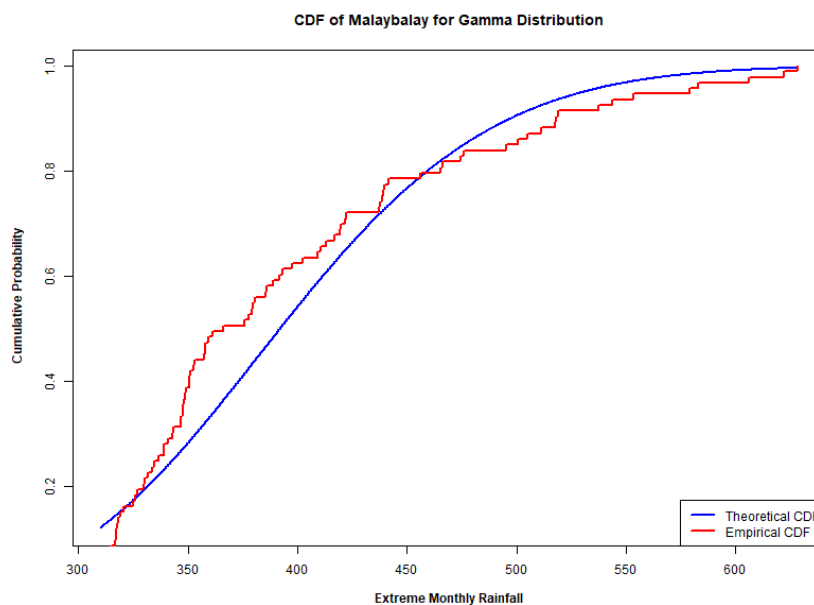


(b) Hinatuan

Figure F.16: CDF of Monthly Rainfall Exceeding the 75th Percentile for General Santos, and Hinatuan

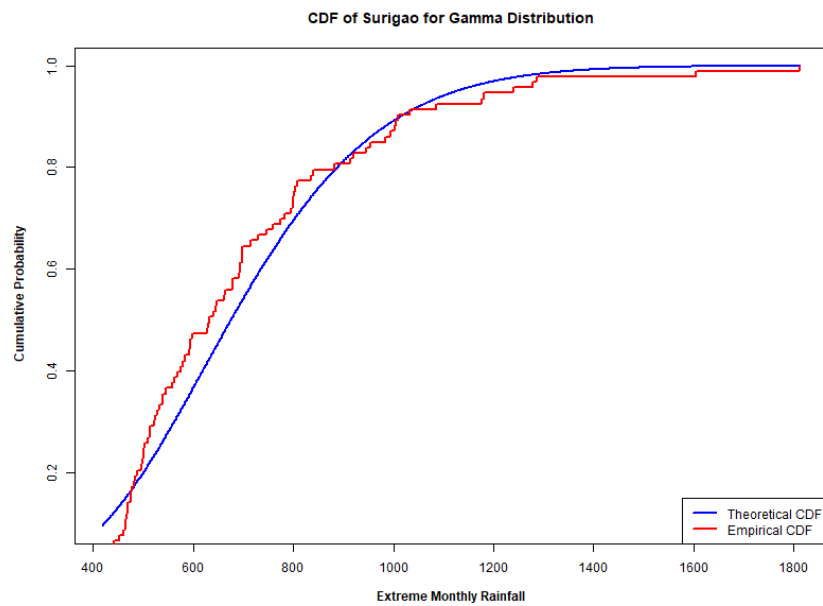


(a) Lumbia

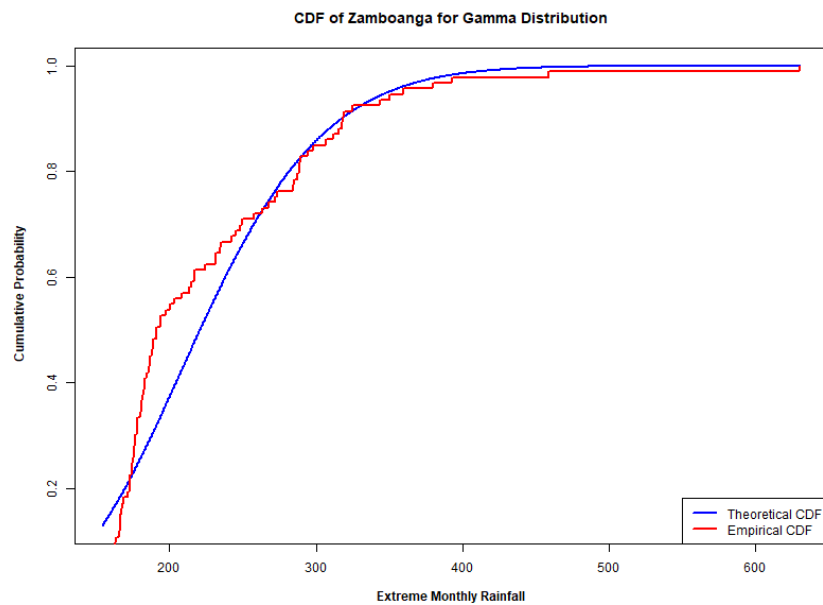


(b) Malaybalay

Figure F.17: CDF of Monthly Rainfall Exceeding the 75th Percentile for Lumbia, and Malaybalay



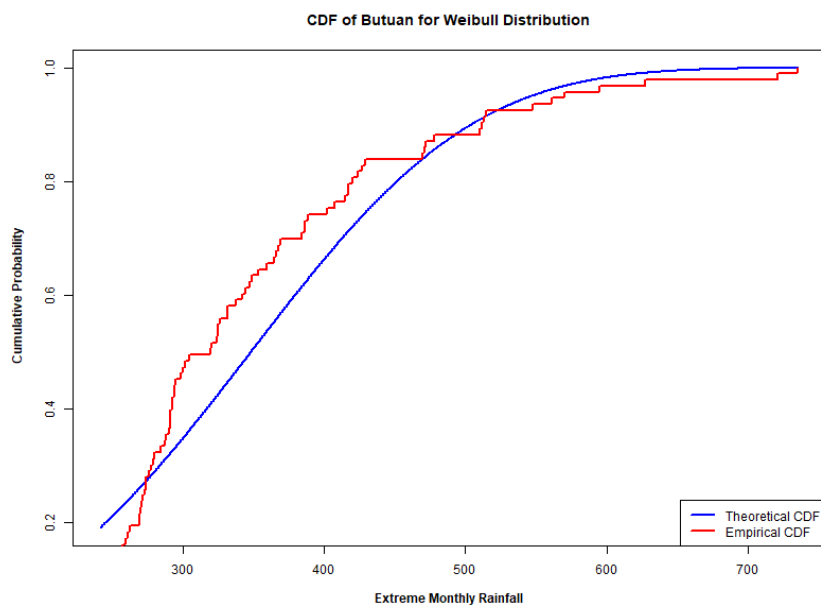
(a) Surigao



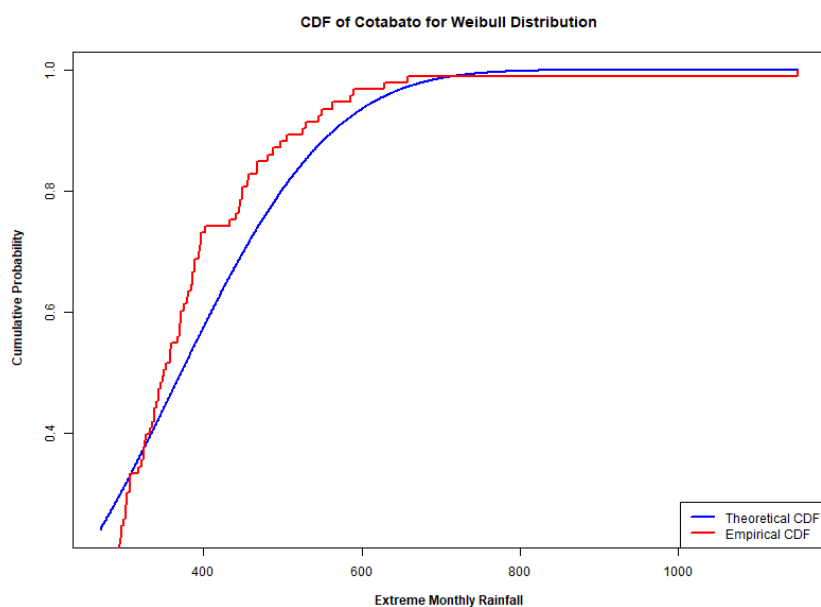
(b) Zamboanga

Figure F.18: CDF of Monthly Rainfall Exceeding the 75th Percentile for Surigao, and Zamboanga

F.1.5 Weibull Distribution

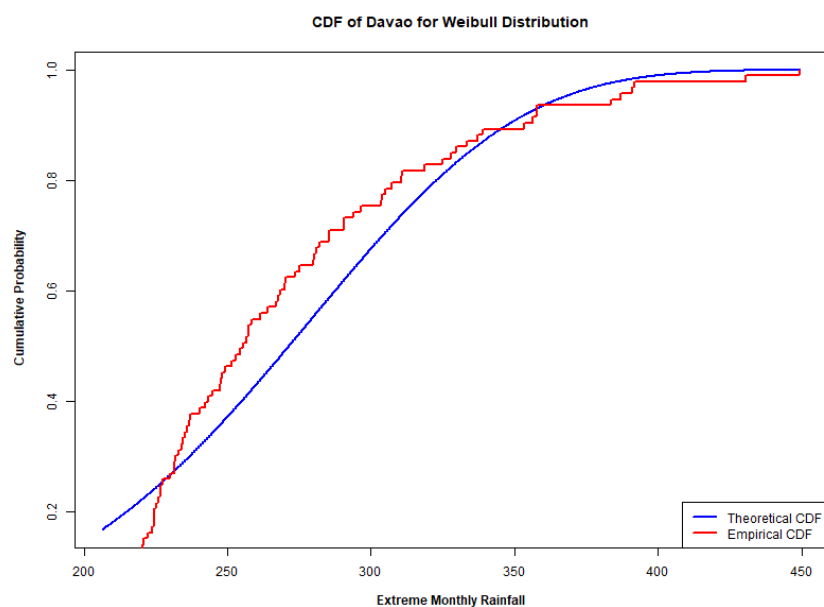


(a) Butuan

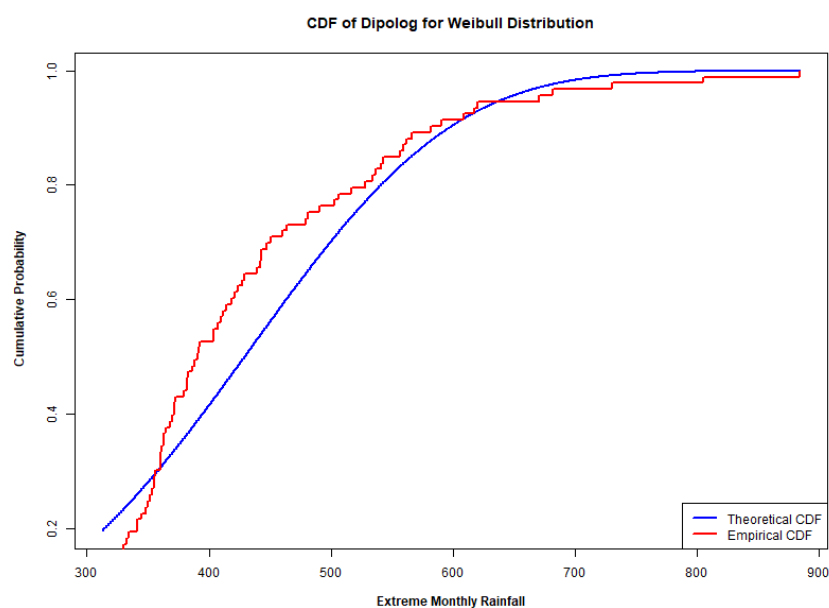


(b) Cotabato

Figure F.19: CDF of Monthly Rainfall Exceeding the 75th Percentile for Butuan, and Cotabato

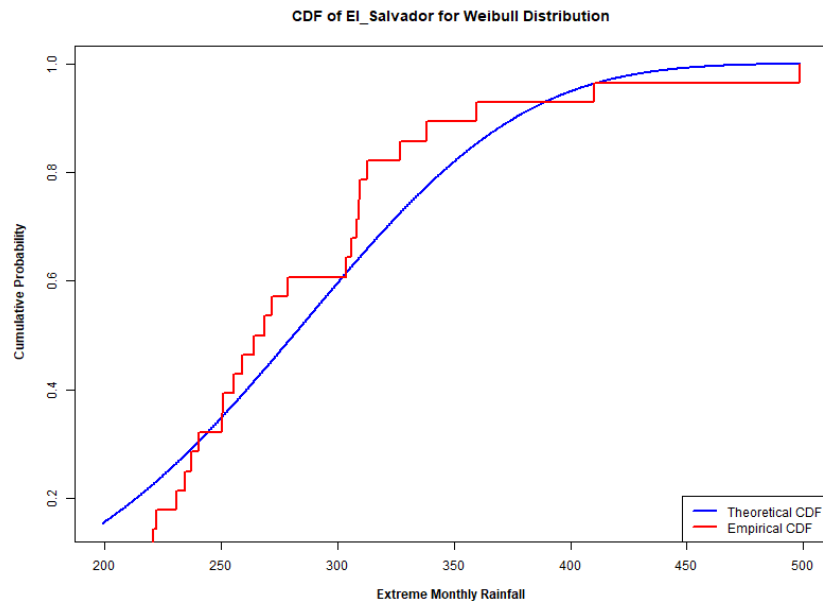


(a) Davao

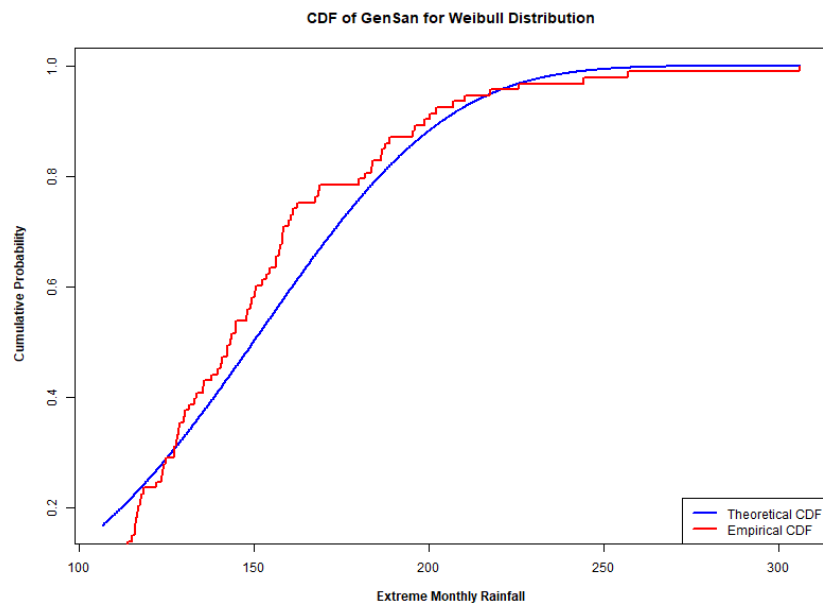


(b) Dipolog

Figure F.20: CDF of Monthly Rainfall Exceeding the 75th Percentile for Davao, and Dipolog

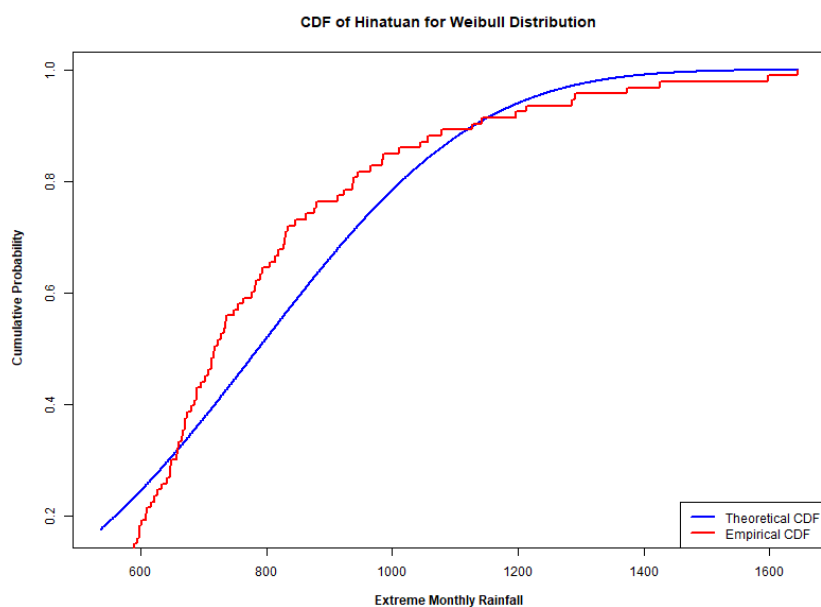


(a) El Salvador

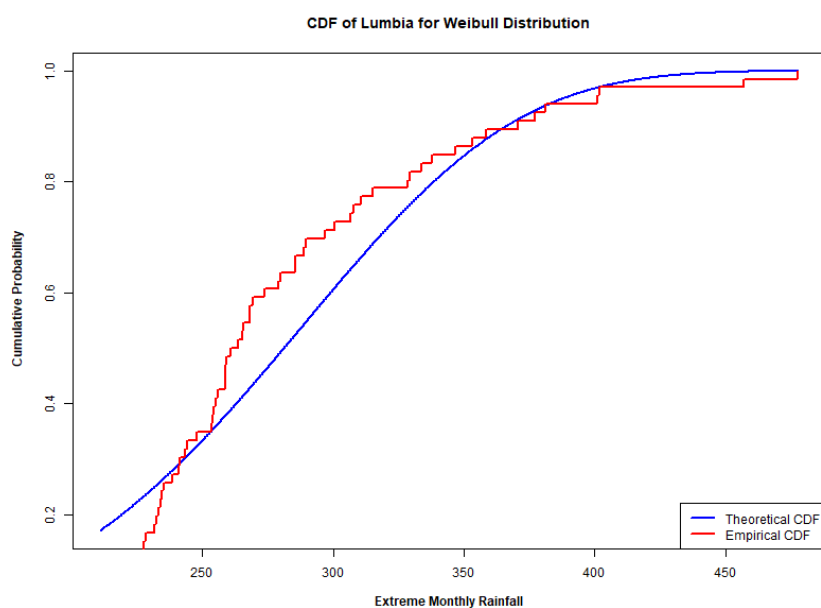


(b) General Santos

Figure F.21: CDF of Monthly Rainfall Exceeding the 75th Percentile for El Salvador, and General Santos

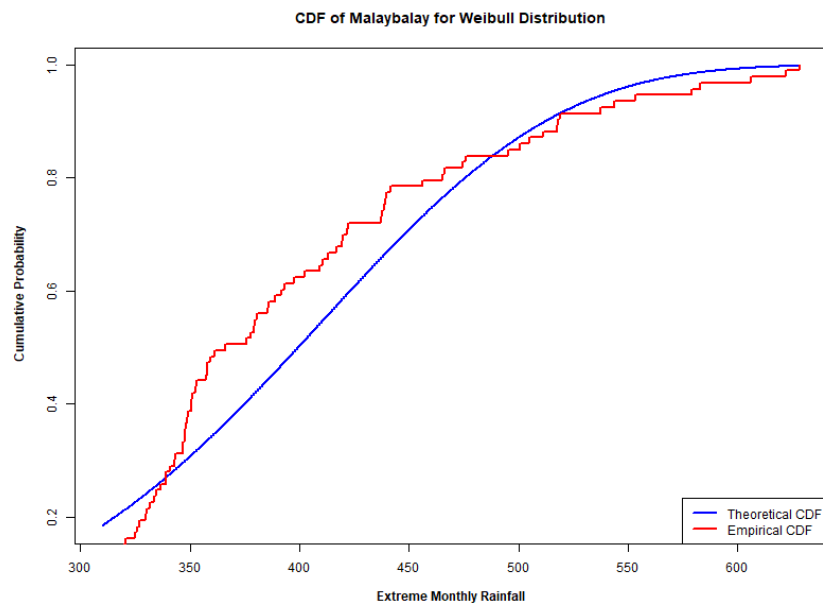


(a) Hinatuan

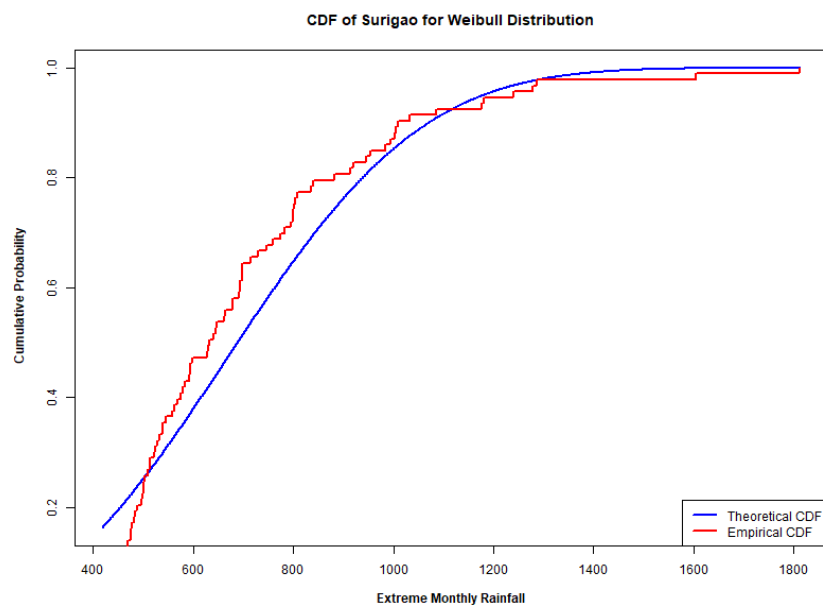


(b) Lumbia

Figure F.22: CDF of Monthly Rainfall Exceeding the 75th Percentile for Hinatuan, and Lumbia

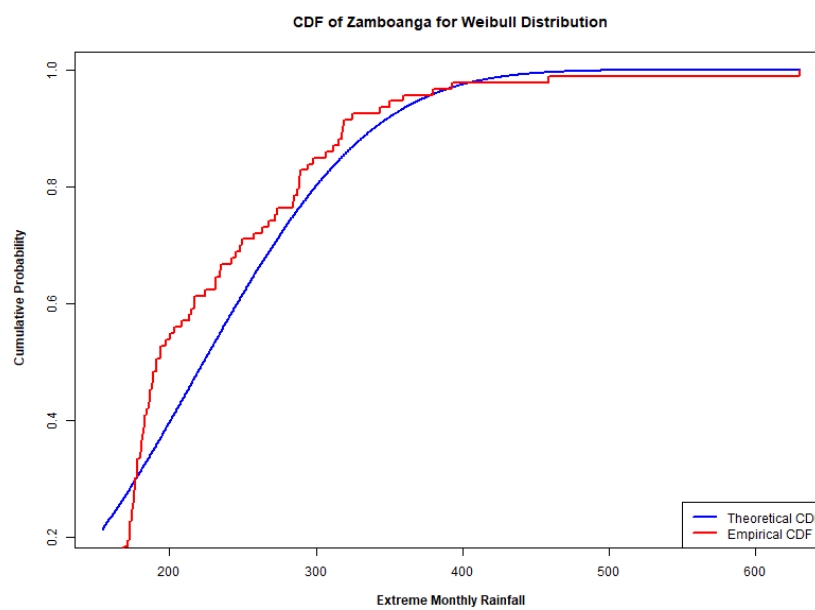


(a) Malaybalay



(b) Surigao

Figure F.23: CDF of Monthly Rainfall Exceeding the 75th Percentile for Malaybalay, and Surigao



(a) Zamboanga

Figure F.24: CDF of Monthly Rainfall Exceeding the 75th Percentile for Zamboanga

APPENDIX G

MONTHLY RAINFALL EXCEEDING THE 90th PERCENTILE

This appendix presents the cumulative probability distributions of monthly rainfall exceeding the 90th percentile. The analysis in Chapter 4 Table 4.15 primarily focuses on the Generalized Extreme-Value (GEV) distribution applied to ten stations. However, for the other two stations, Gumbel and Gamma distribution is used. These additional results are provided for further exploration and comparison.

G.1 Cumulative Probability Distribution

This section illustrates the cumulative probability distribution (CDF) of monthly rainfall exceeding 90th percentile for the five (5) distributions fitted in the study.

G.1.1 Generalized Pareto Distribution

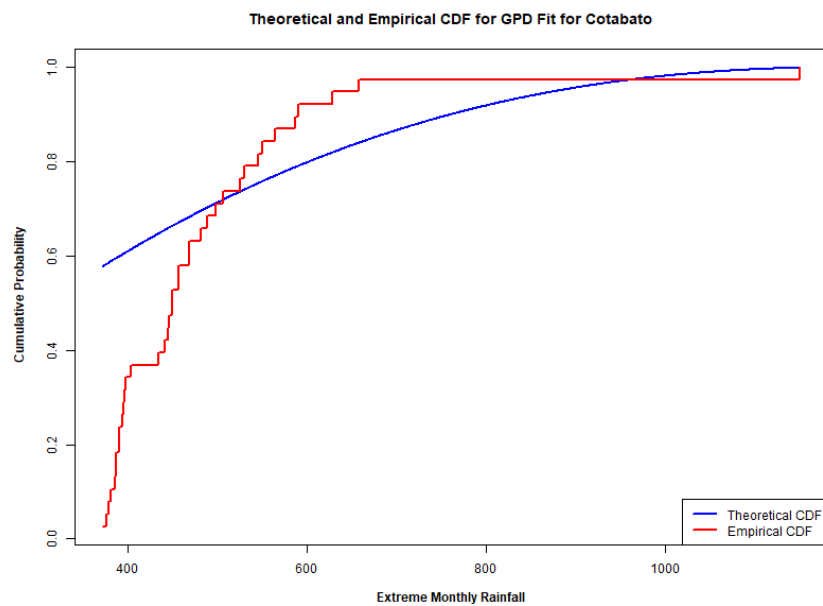
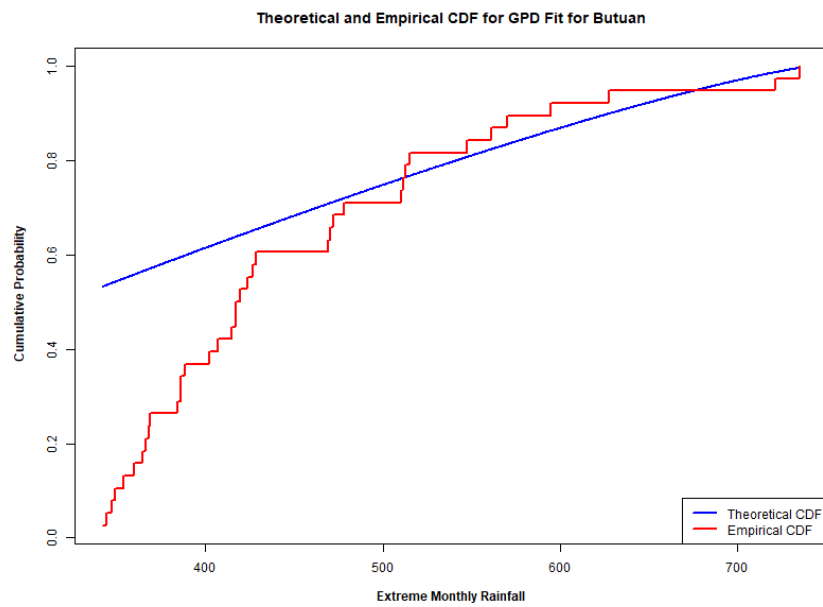


Figure G.1: CDF of Monthly Rainfall Exceeding the 90th Percentile for Butuan, and Cotabato

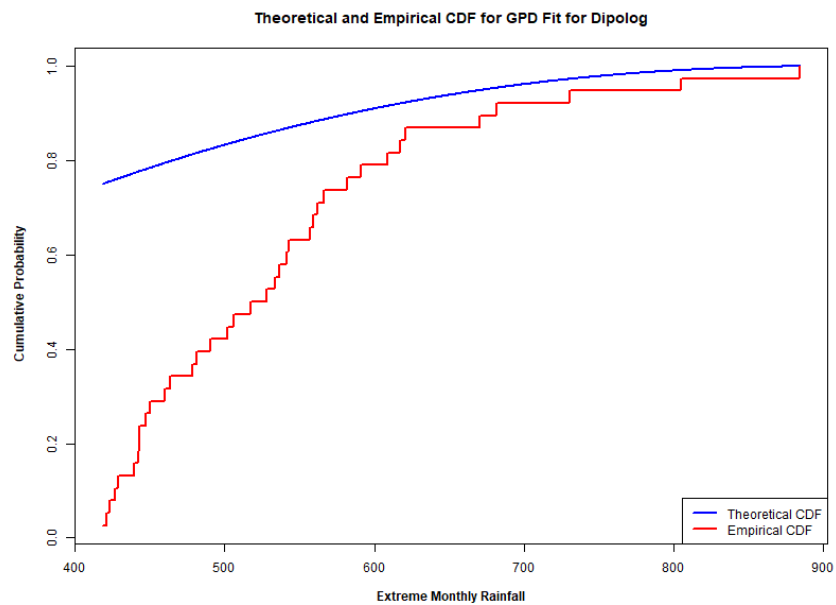
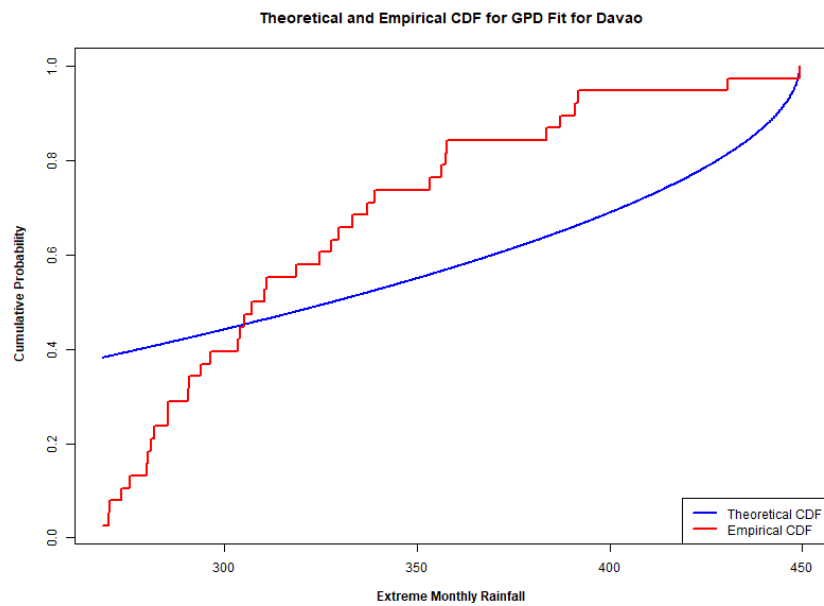


Figure G.2: CDF of Monthly Rainfall Exceeding the 90th Percentile for Davao, and Dipolog

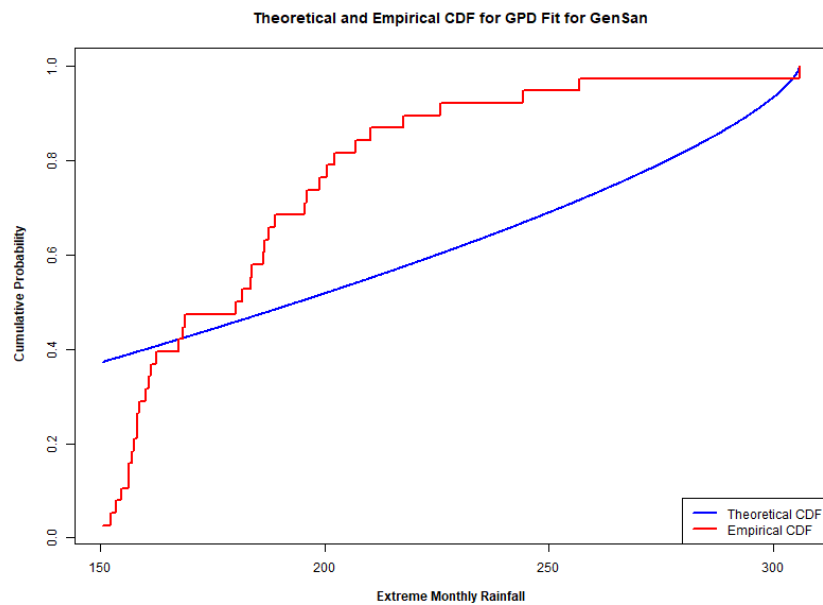
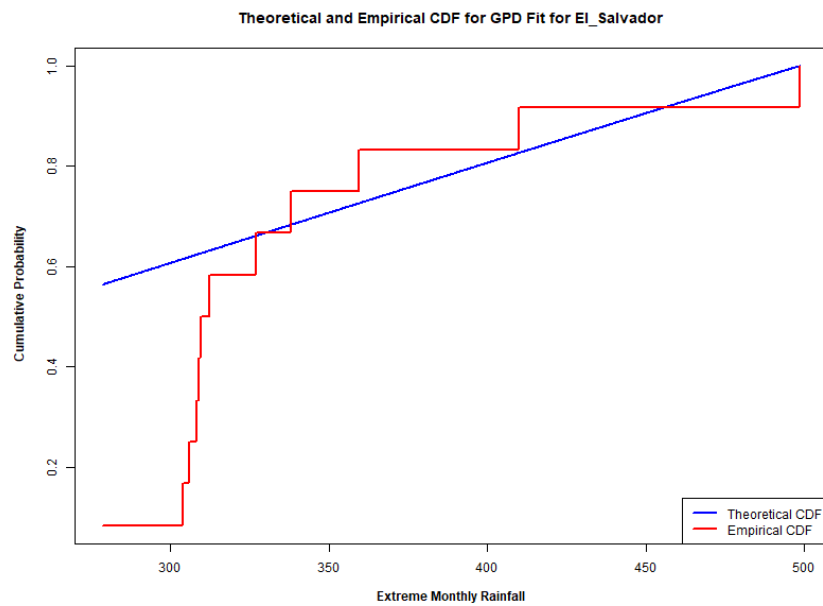
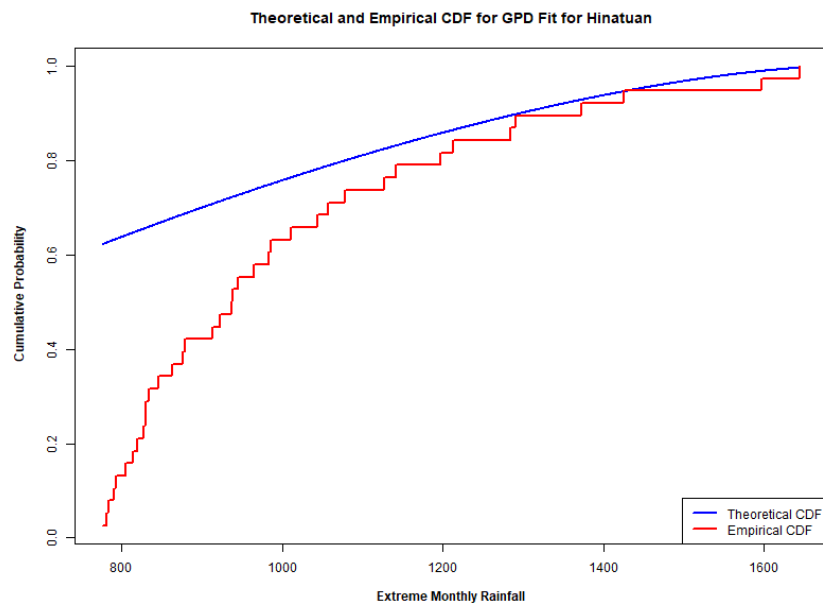
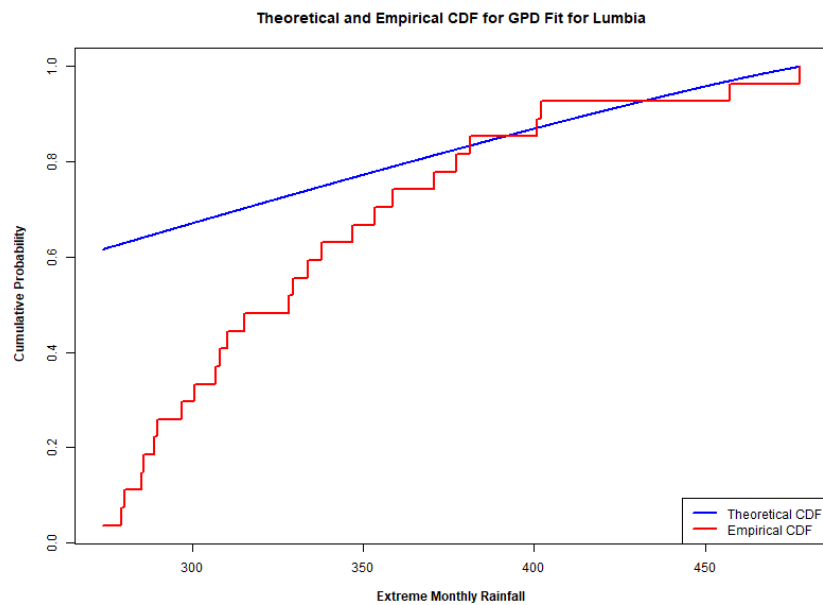


Figure G.3: CDF of Monthly Rainfall Exceeding the 90th Percentile for El Salvador and General Santos

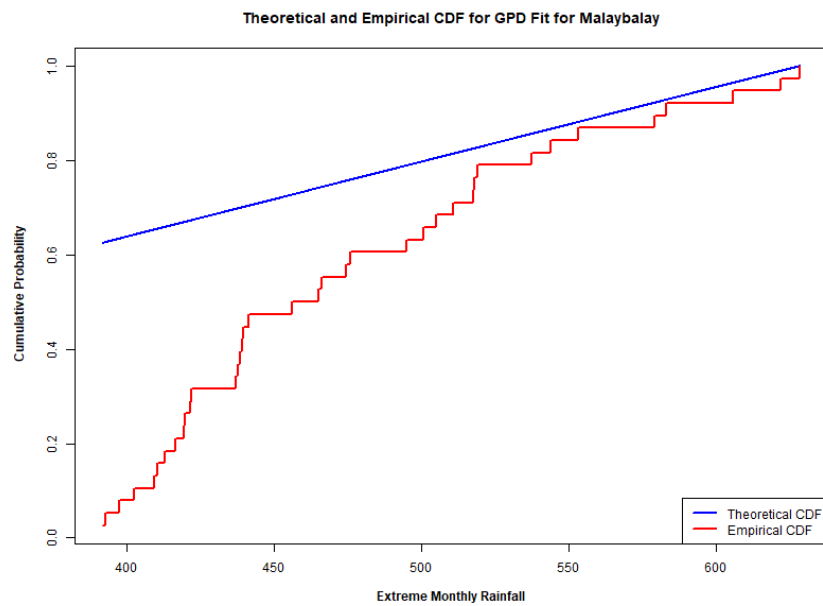


(a) Hinatuan

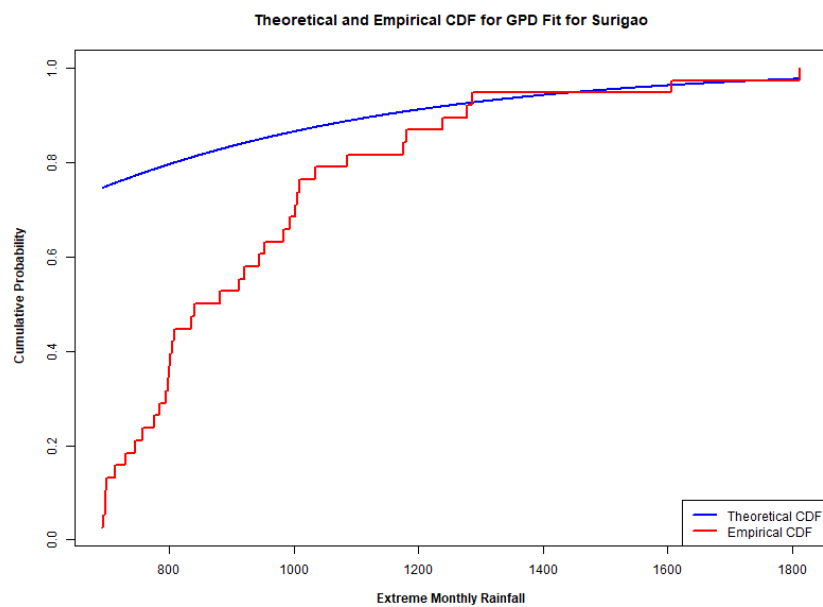


(b) Lumbia

Figure G.4: CDF of Monthly Rainfall Exceeding the 90th Percentile for Hinatuan and Lumbia

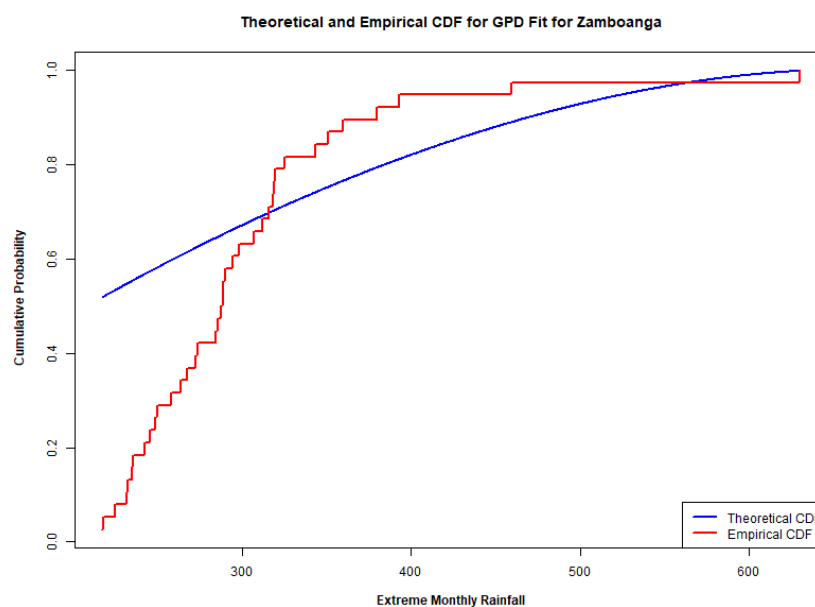


(a) Malaybalay



(b) Surigao

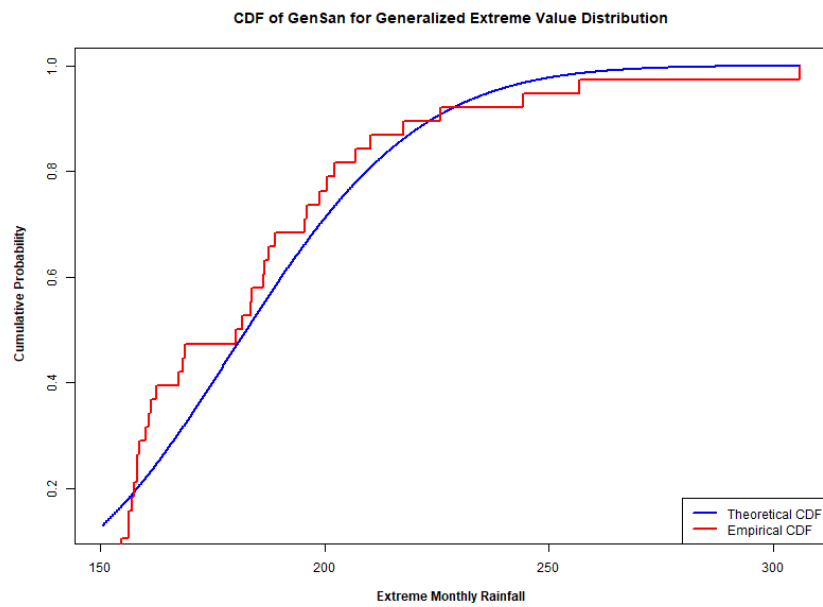
Figure G.5: CDF of Monthly Rainfall Exceeding the 90th Percentile for Malaybalay and Surigao



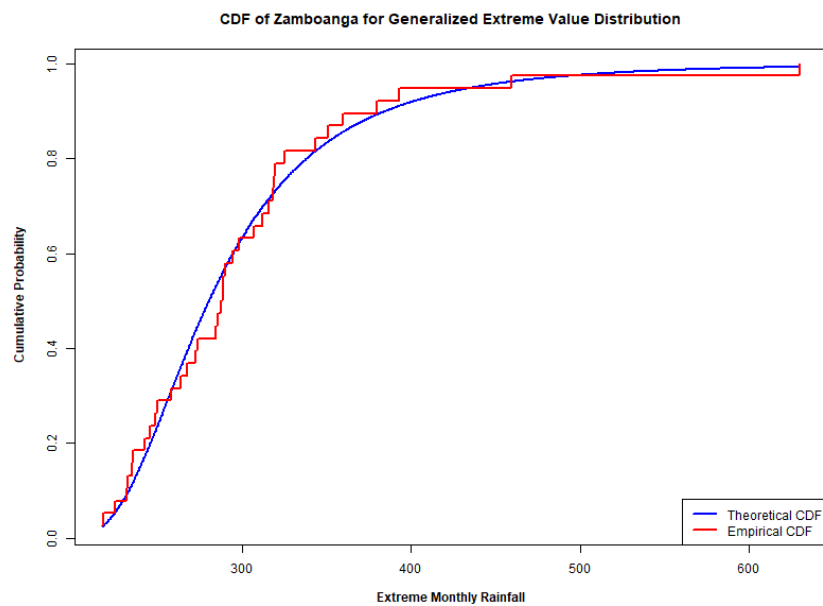
(a) Zamboanga

Figure G.6: CDF of Monthly Rainfall Exceeding the 90th Percentile for Zamboanga

G.1.2 Generalized Extreme-Value Distribution



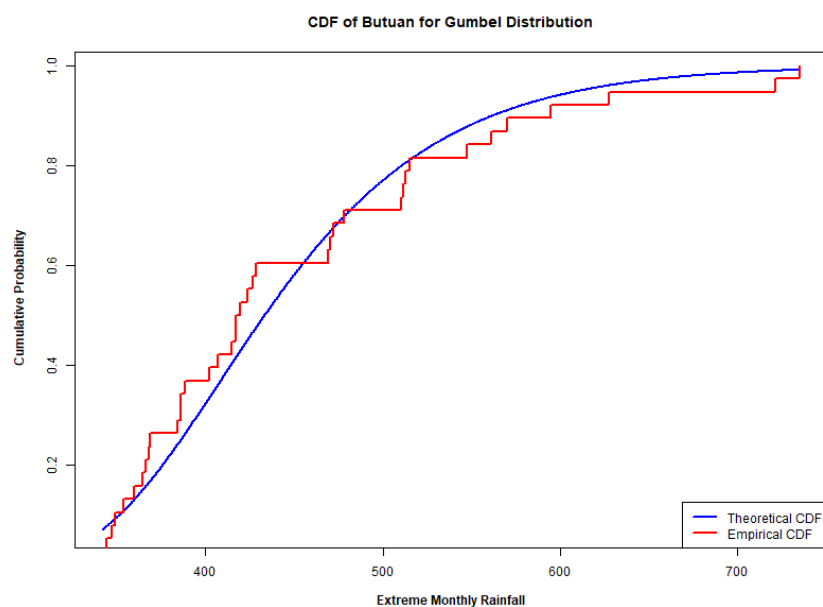
(a) GenSan



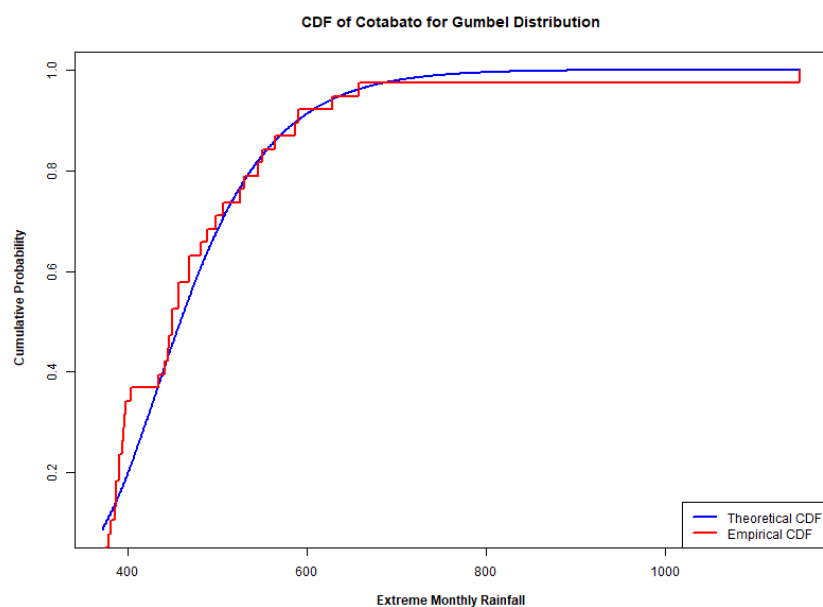
(b) Zamboanga

Figure G.7: CDF of Monthly Rainfall Exceeding the 90th Percentile for Genera Santos, and Zamboanga

G.1.3 Gumbel Distribution

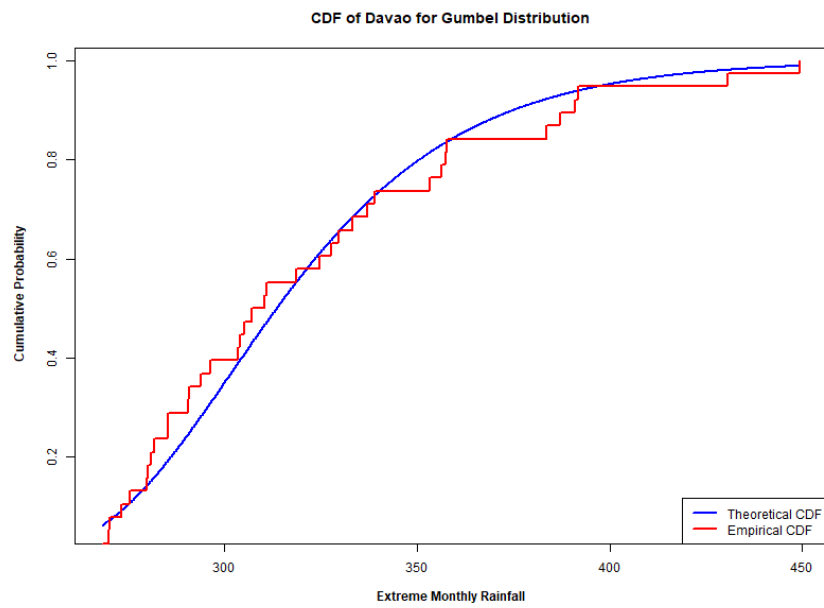


(a) Butuan

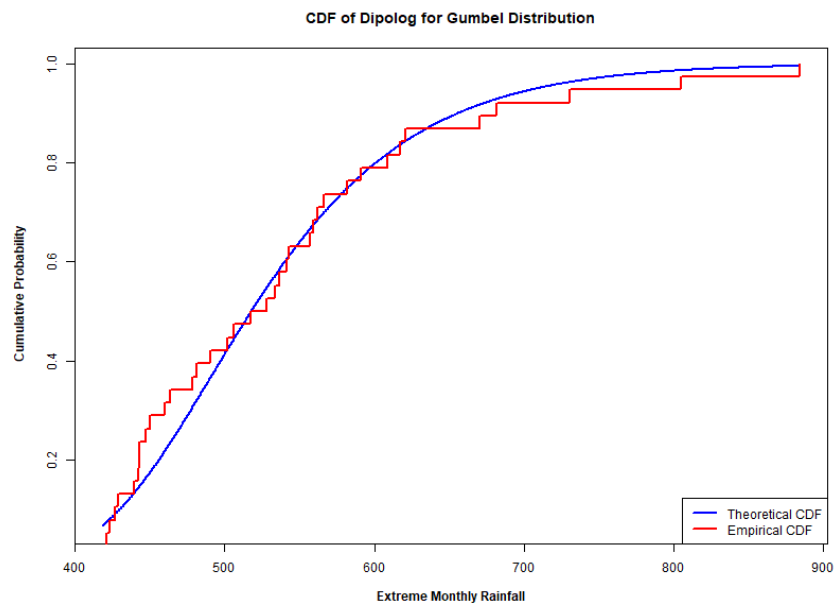


(b) Cotabato

Figure G.8: CDF of Monthly Rainfall Exceeding the 90th Percentile for Butuan, and Cotabato

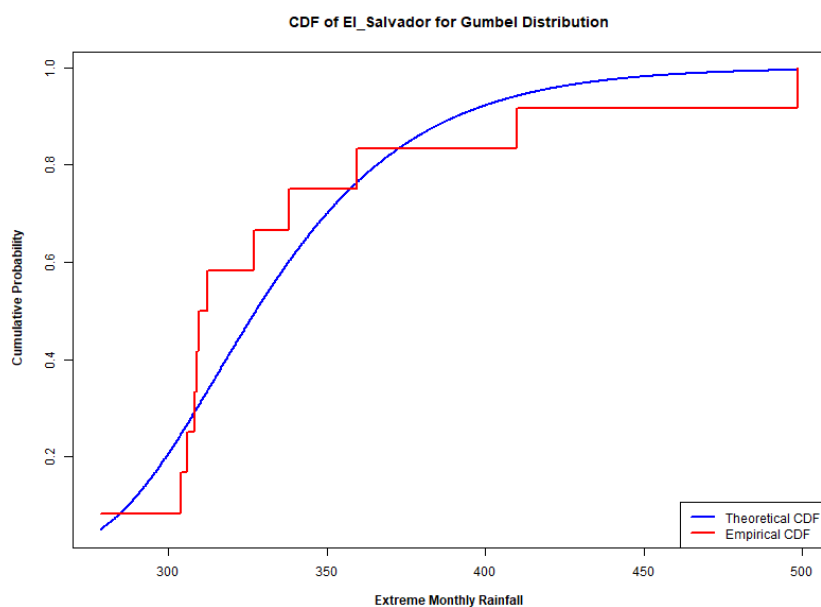


(a) Davao

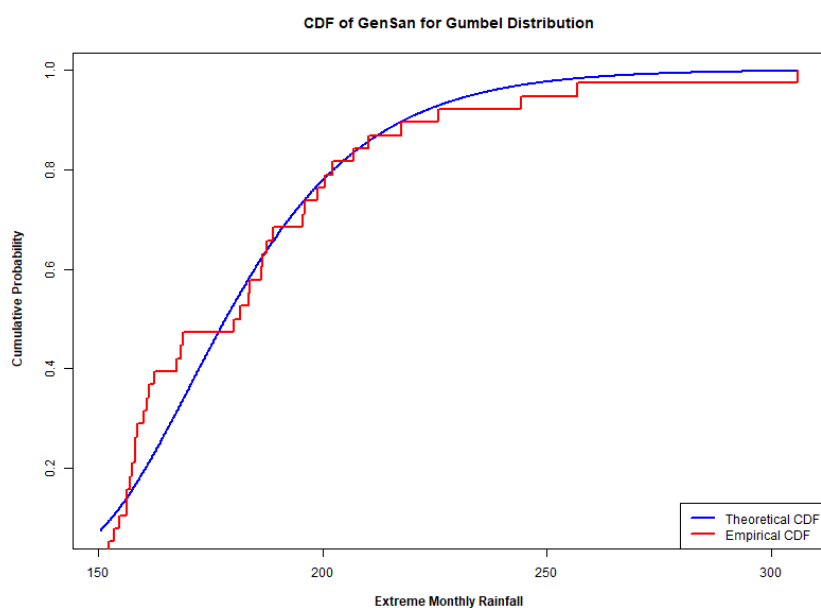


(b) Dipolog

Figure G.9: CDF of Monthly Rainfall Exceeding the 90th Percentile for Davao, and Dipolog

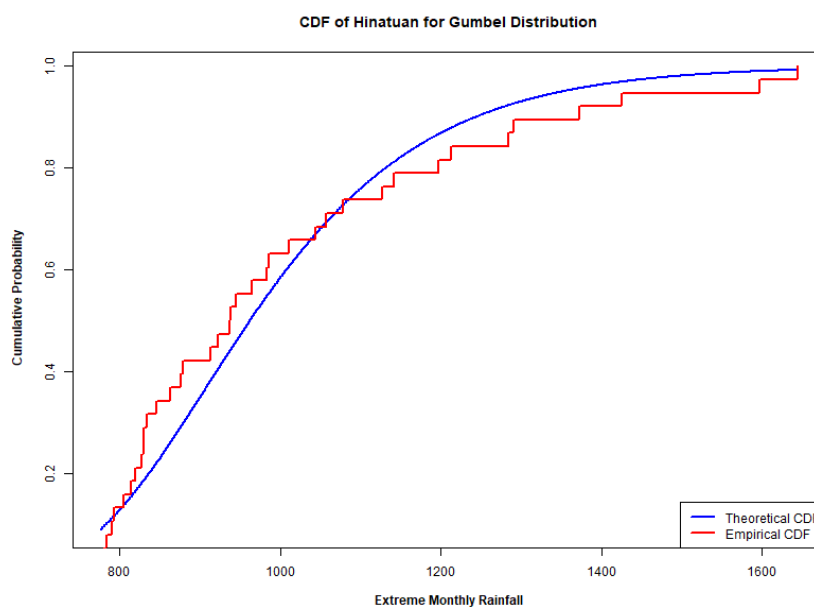


(a) El Salvador

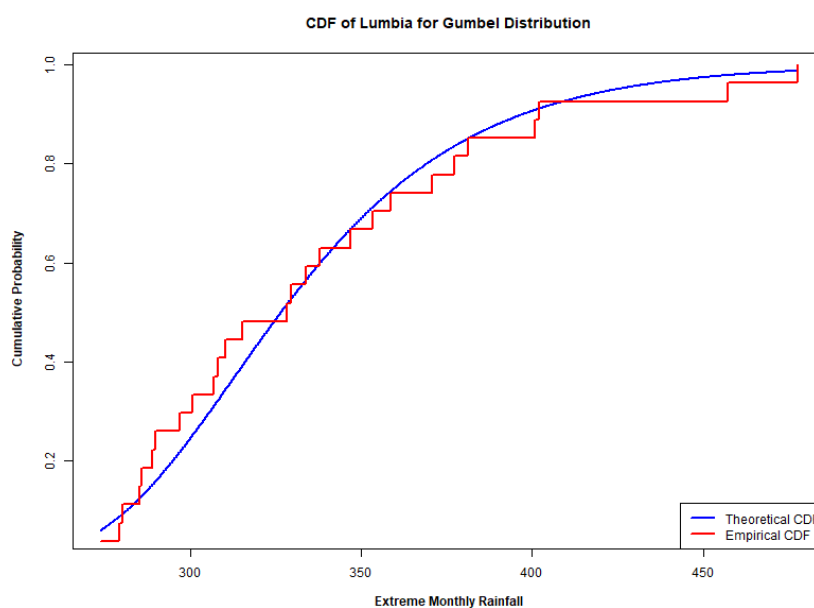


(b) General Santos

Figure G.10: CDF of Monthly Rainfall Exceeding the 90th Percentile for El Salvador, and General Santos

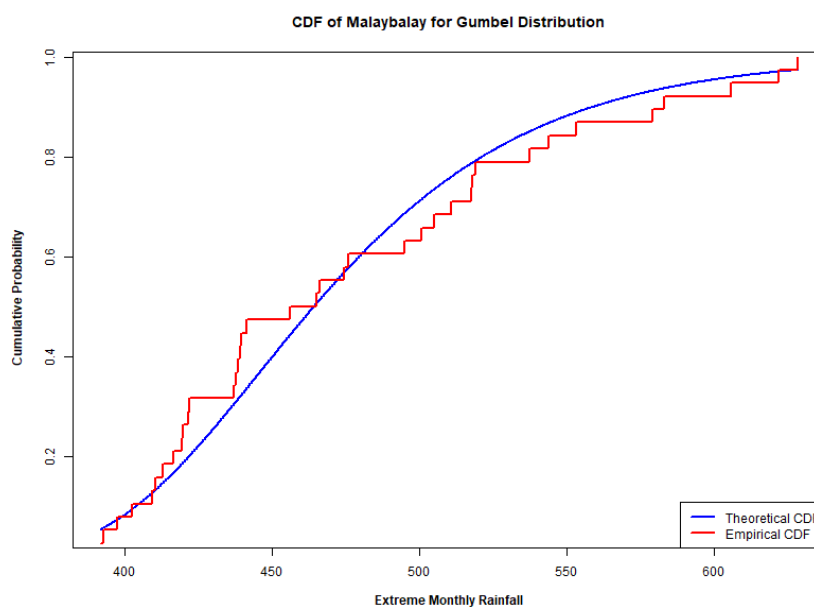


(a) Hinatuan

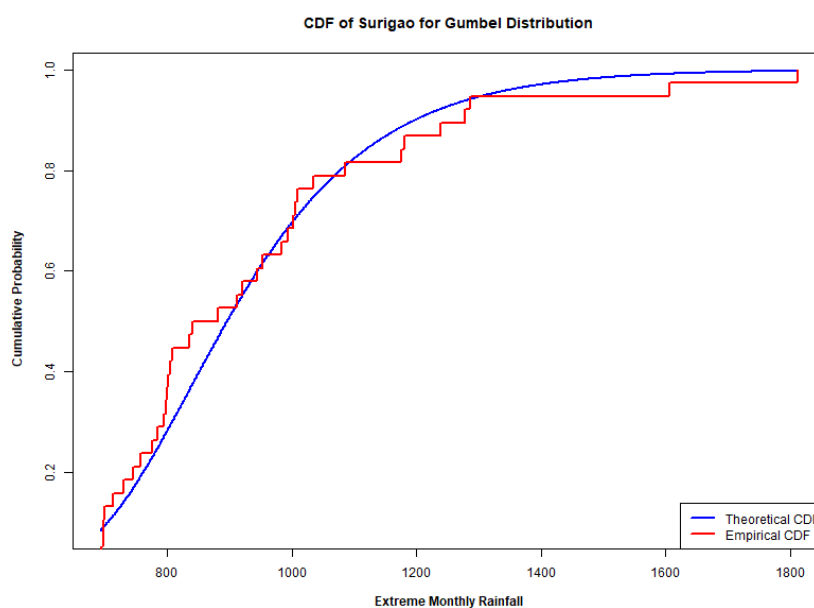


(b) Lumbia

Figure G.11: CDF of Monthly Rainfall Exceeding the 90th Percentile for Hinatuan, and Lumbia



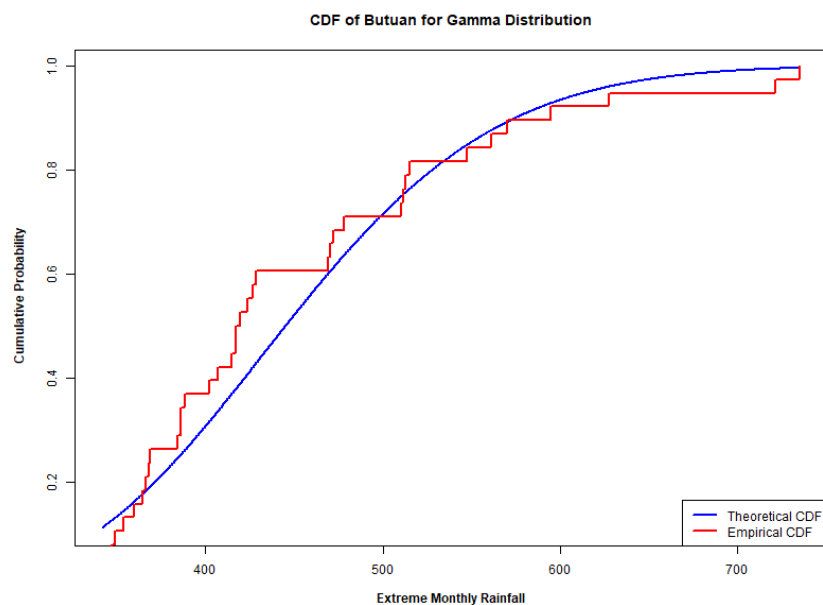
(a) Malaybalay



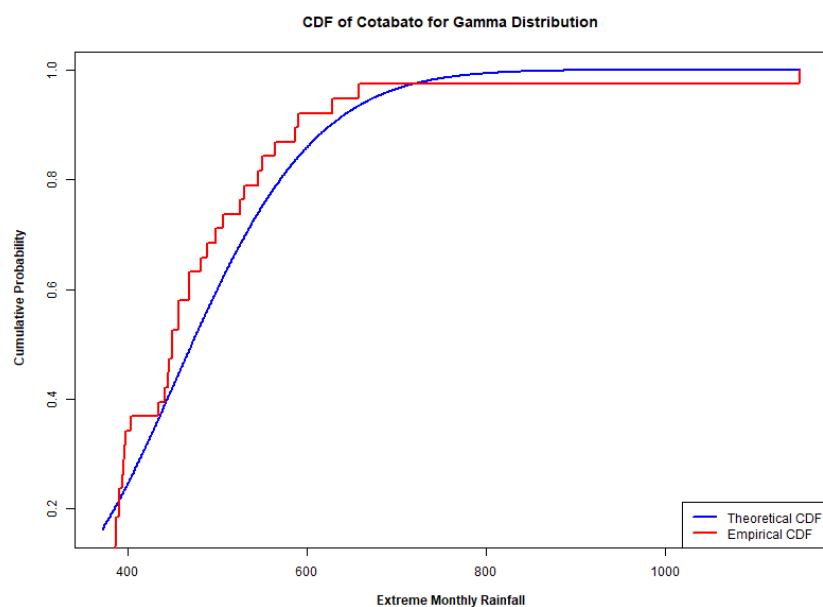
(b) Surigao

Figure G.12: CDF of Monthly Rainfall Exceeding the 90th Percentile for Malaybalay, and Surigao

G.1.4 Gamma Distribution

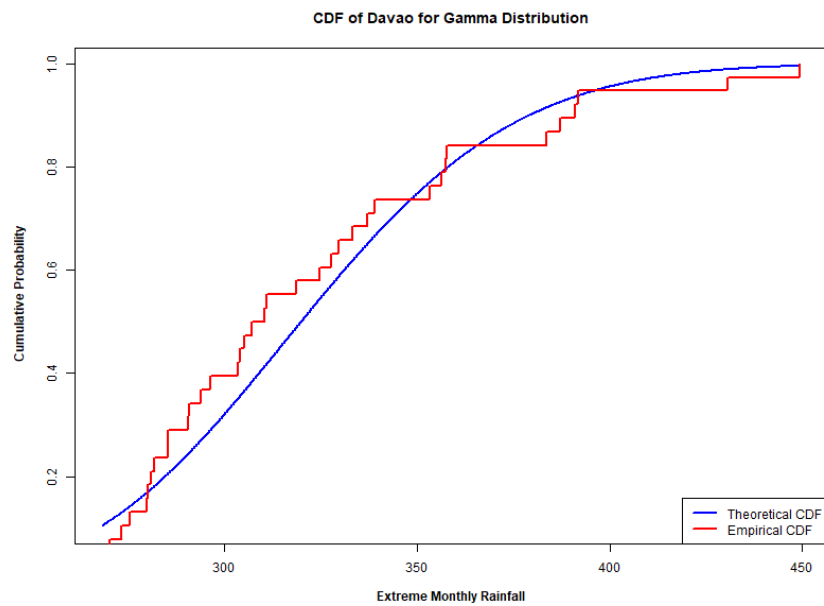


(a) Butuan

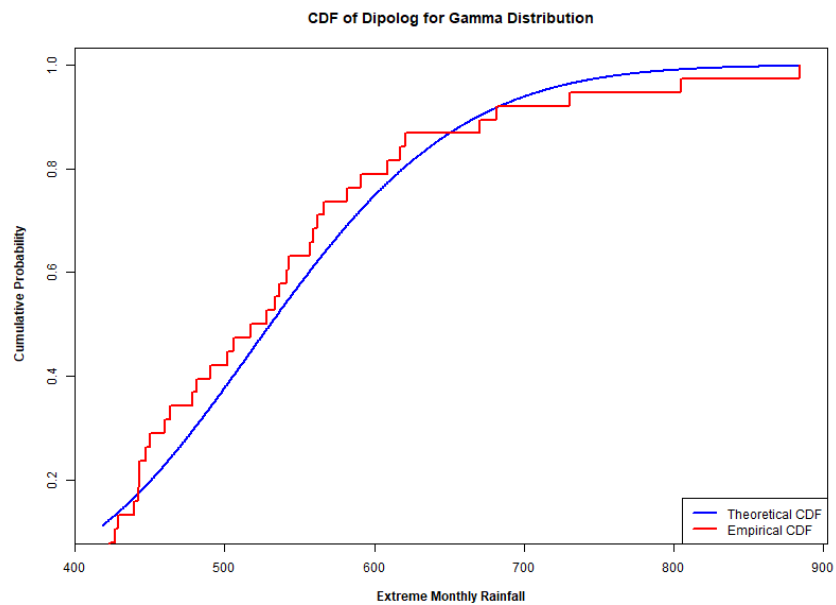


(b) Cotabato

Figure G.13: CDF of Monthly Rainfall Exceeding the 90th Percentile for Butuan, and Cotabato

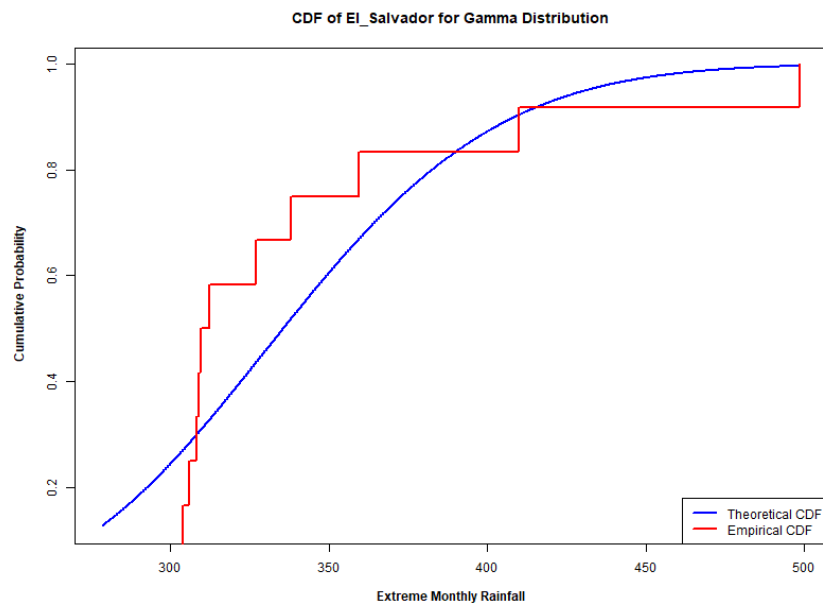


(a) Davao

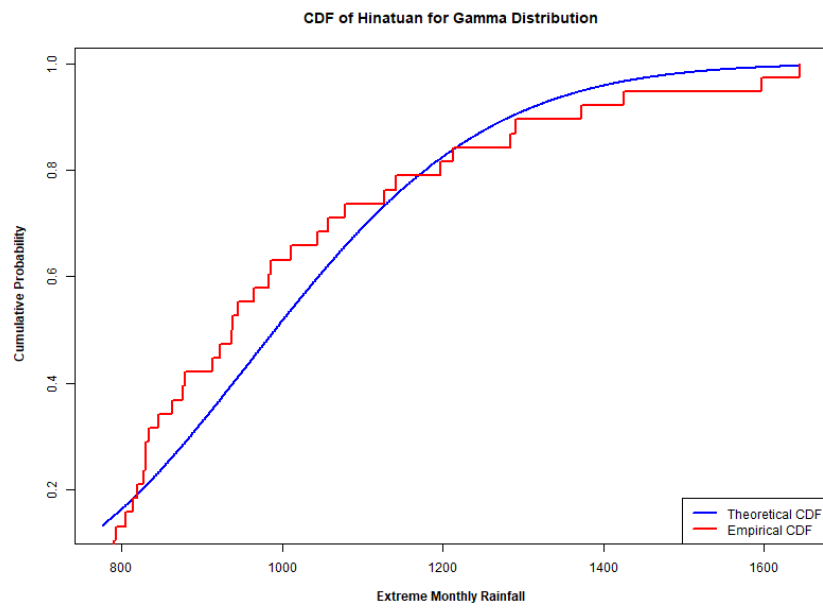


(b) Dipolog

Figure G.14: CDF of Monthly Rainfall Exceeding the 90th Percentile for Davao, and Dipolog

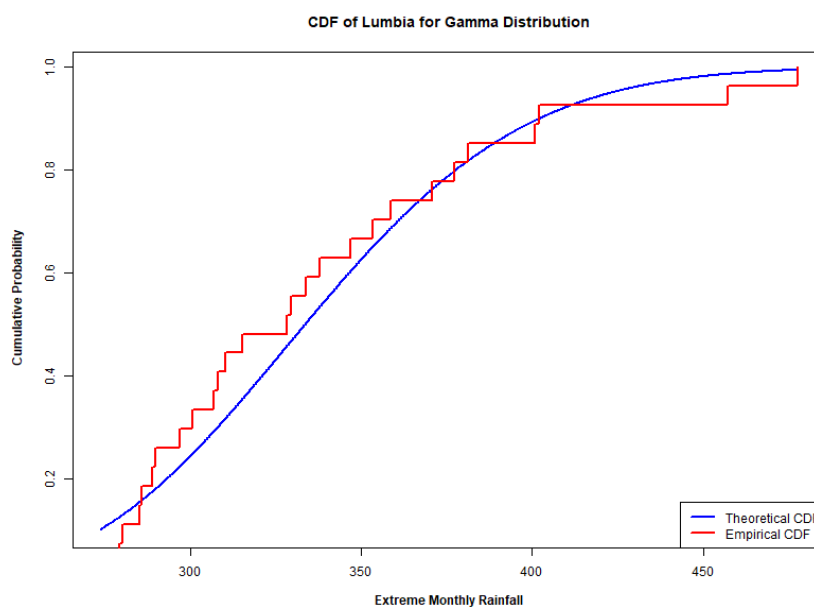


(a) El Salvador

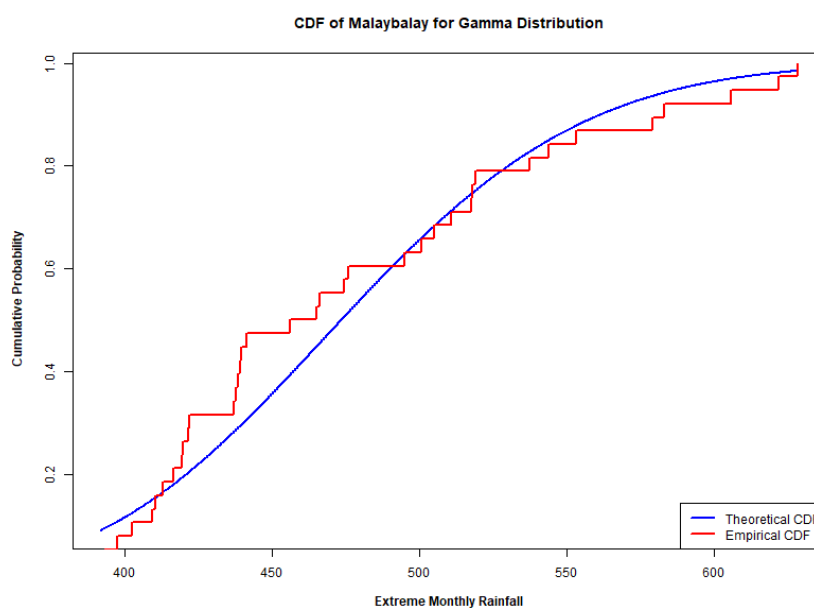


(b) Hinatuan

Figure G.15: CDF of Monthly Rainfall Exceeding the 90th Percentile for El Salvador, and Hinatuan

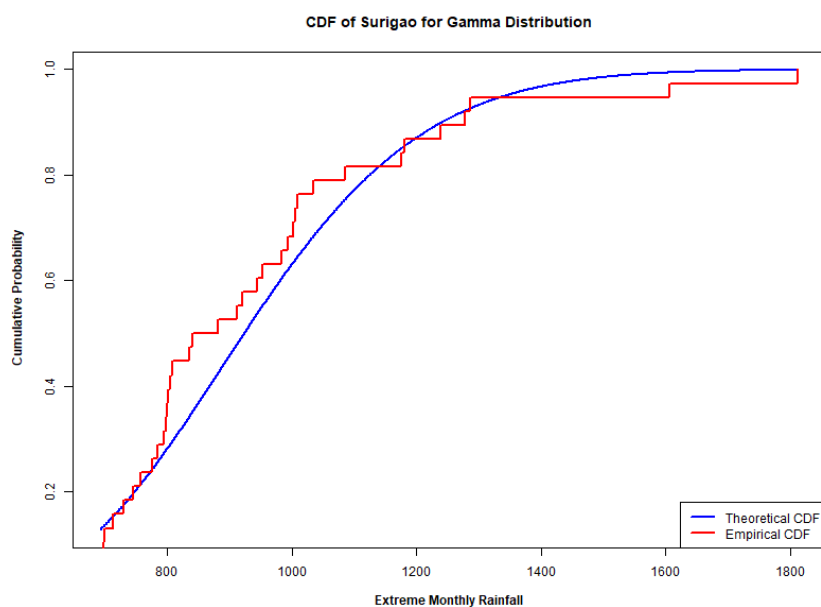


(a) Lumbia

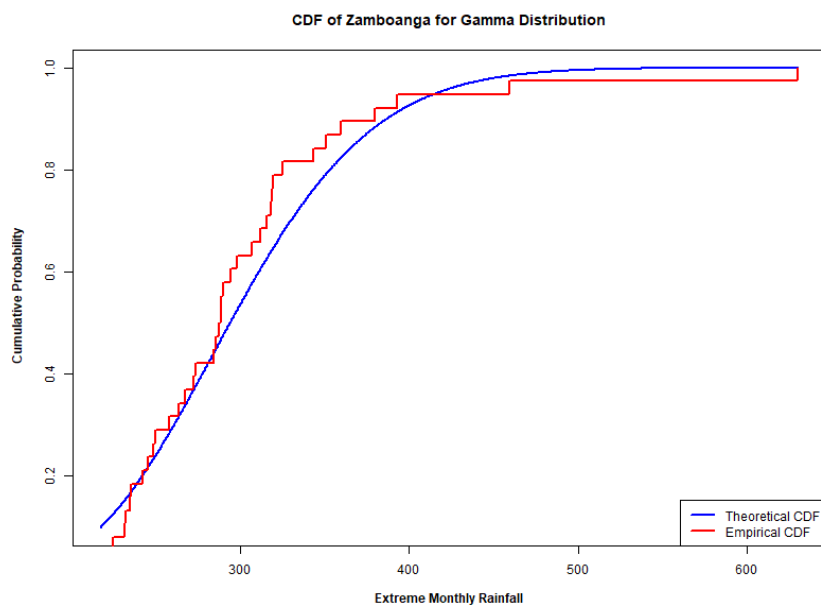


(b) Malaybalay

Figure G.16: CDF of Monthly Rainfall Exceeding the 90th Percentile for Lumbia, and Malaybalay



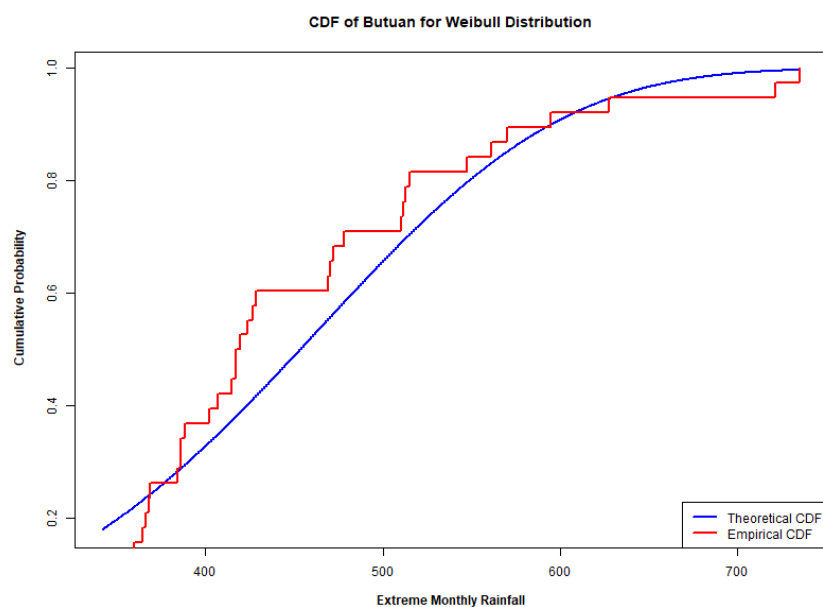
(a) Surigao



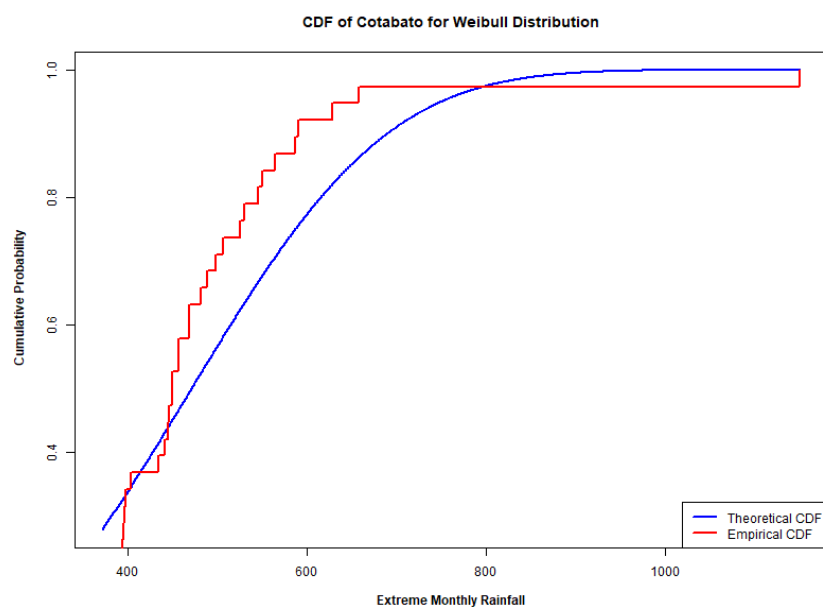
(b) Zamboanga

Figure G.17: CDF of Monthly Rainfall Exceeding the 90th Percentile for Surigao, and Zamboanga

G.1.5 Weibull Distribution

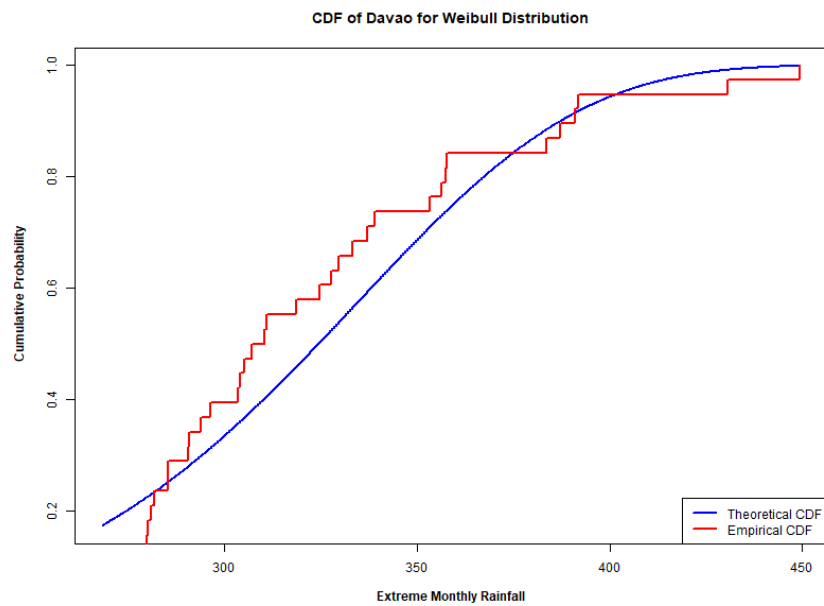


(a) Butuan

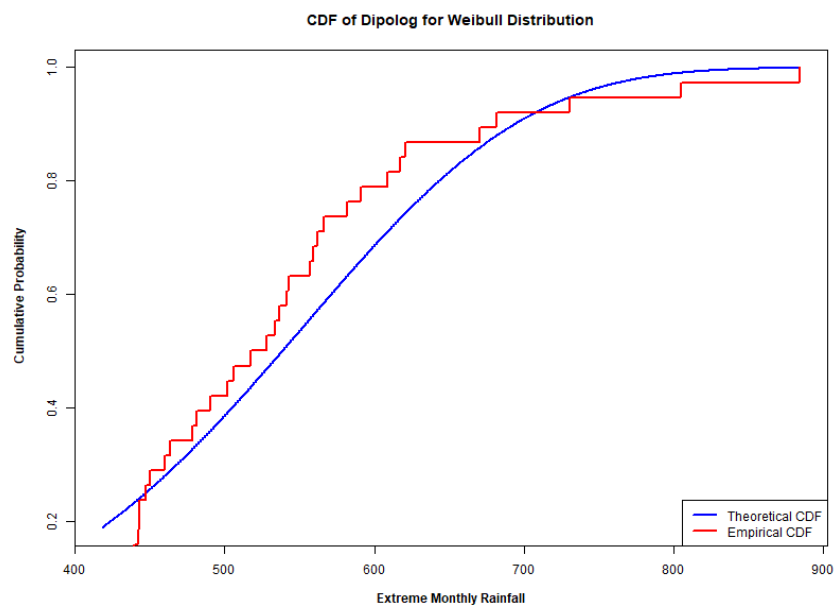


(b) Cotabato

Figure G.18: CDF of Monthly Rainfall Exceeding the 90th Percentile for Butuan, and Cotabato

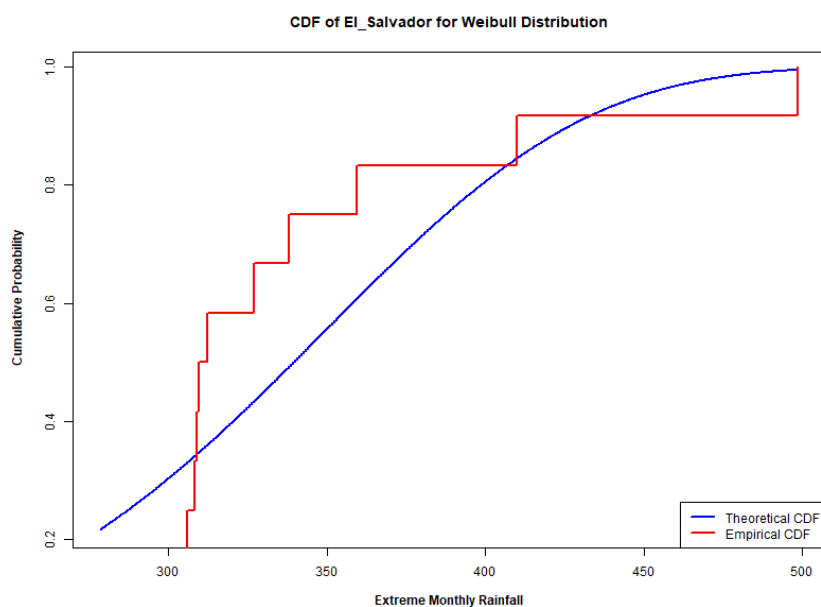


(a) Davao

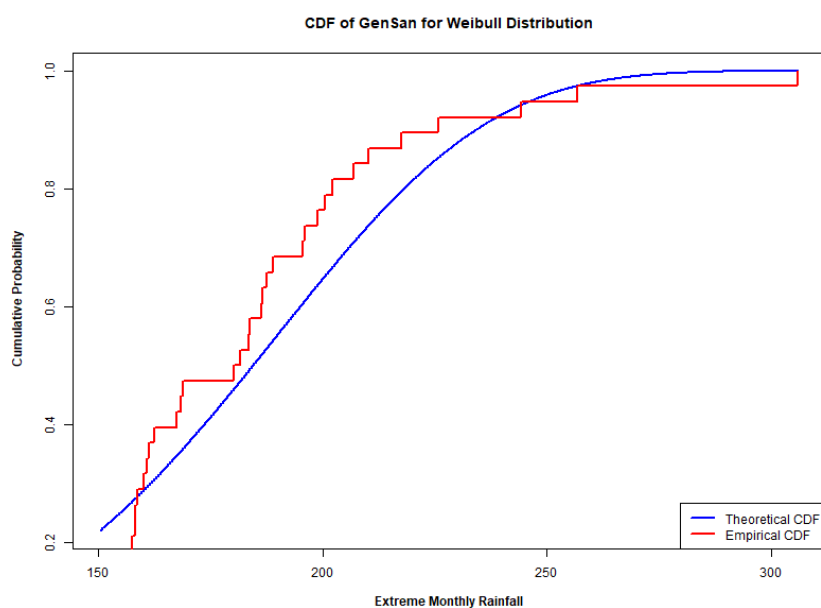


(b) Dipolog

Figure G.19: CDF of Monthly Rainfall Exceeding the 90th Percentile for Davao, and Dipolog

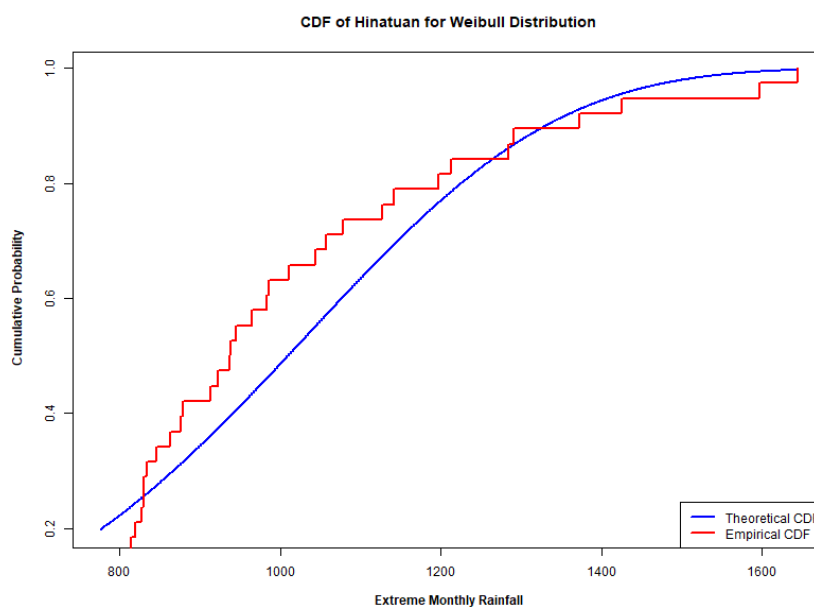


(a) El Salvador

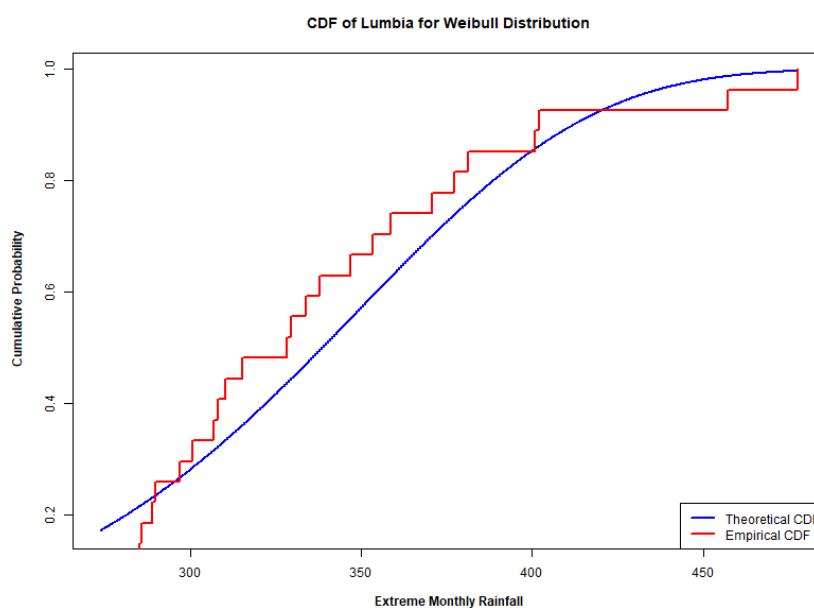


(b) General Santos

Figure G.20: CDF of Monthly Rainfall Exceeding the 90th Percentile for El Salvador, and General Santos

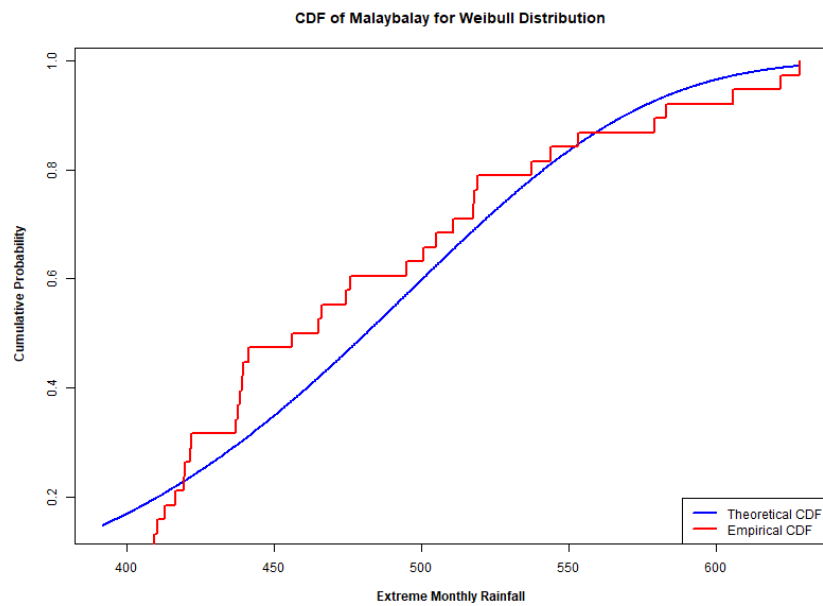


(a) Hinatuan

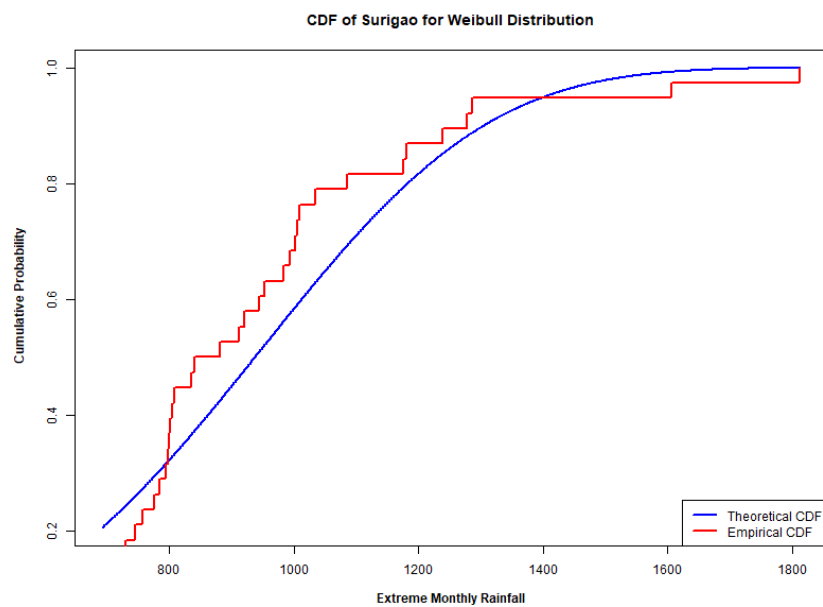


(b) Lumbia

Figure G.21: CDF of Monthly Rainfall Exceeding the 90th Percentile for Hinatuan, and Lumbia

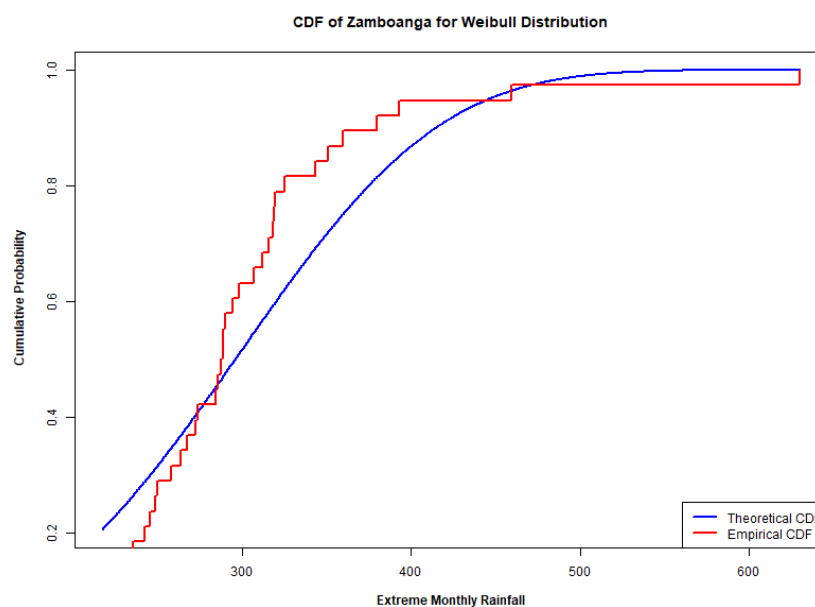


(a) Malaybalay



(b) Surigao

Figure G.22: CDF of Monthly Rainfall Exceeding the 90th Percentile for Malaybalay, and Surigao



(a) Zamboanga

Figure G.23: CDF of Monthly Rainfall Exceeding the 90th Percentile for Zamboanga