

# Use of EM-DAT to evaluate the Sendai Framework for Disaster Risk Reduction in Africa

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# Background

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- ❖ SFDRR
- ❖ Plan of Action (PoA)
  - ❖ Implementation Matrix (now 2.0)
- ❖ Biennial reporting to Ministers responsible for DRR on PoA.
- ❖ First Biennial Report = 2015-2018
- ❖ Second Biennial Report = 2019-2020



# Aim of the Biennial Report

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- ❖ To comprehensively report on African progress by African to inform, lobby and enhance understanding of disaster risk reduction progress against targets and indicators.
- ❖ Provide future benchmark against which we can measure ourselves and showcase progress.



# Methodologies used

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- ❖ For baseline information:
  - ❖ Historical data collected from MSs
  - ❖ Emergency Events Database (EM-DAT) (correlation to MSs reporting)
  - ❖ INFORM Index
  - ❖ DesInventar (correlation to MSs reporting)
- ❖ Research conducted:
  - ❖ Country reporting and other research
  - ❖ Online country self assessments (RECs and MSs) according to Monitoring and Reporting Framework of 2018.



# Research Process

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- ✦ 2015-2018

- ✦ Four workshops (**40 MS participated = 72%**)

- ✦ 2 online assessment tools (SFDRR and PoA)

- ✦ 2019-2020 = Four workshops (**13 MS participated = 24%**)

- ✦ **Consolidated online assessment tool**



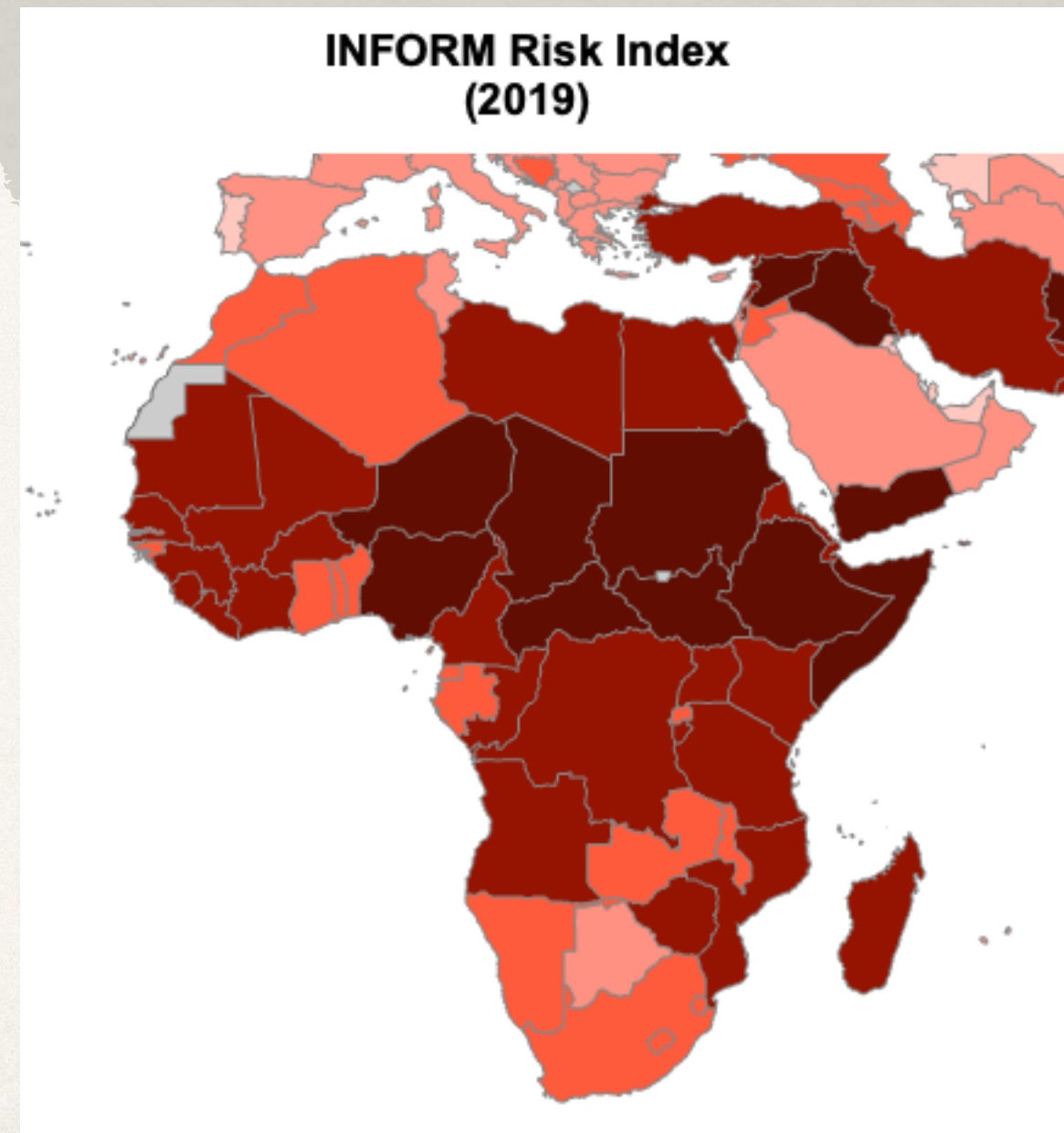
# Benchmarking: INFORM

- ❖ INFORM Index was used as benchmark.
  - ❖ Collaboration of the Inter-Agency Standing Committee Reference Group on Risk, Early Warning and Preparedness and the European Commission.
- ❖ INFORM is a composite indicator.
- ❖ Uses 54 different indicators (Global datasets).
- ❖ Equal weight given to hazards, vulnerability and coping capacity.
- ❖ From INFORM we can deduce which MSs are the most at-risk and see trends.
- ❖ Covers all MSs.



# INFORM - Risk Index

REC	2015	2016	2017	2018
EAC	5,9	6,0	6,4	6,2
ECCAS	3,2	4,9	5,5	5,4
ECOWAS	4,5	4,4	4,9	5,0
IGAD	6,5	6,5	6,8	6,8
UMA	4,3	4,3	4,6	4,5
SADC	4,3	4,1	4,3	4,4

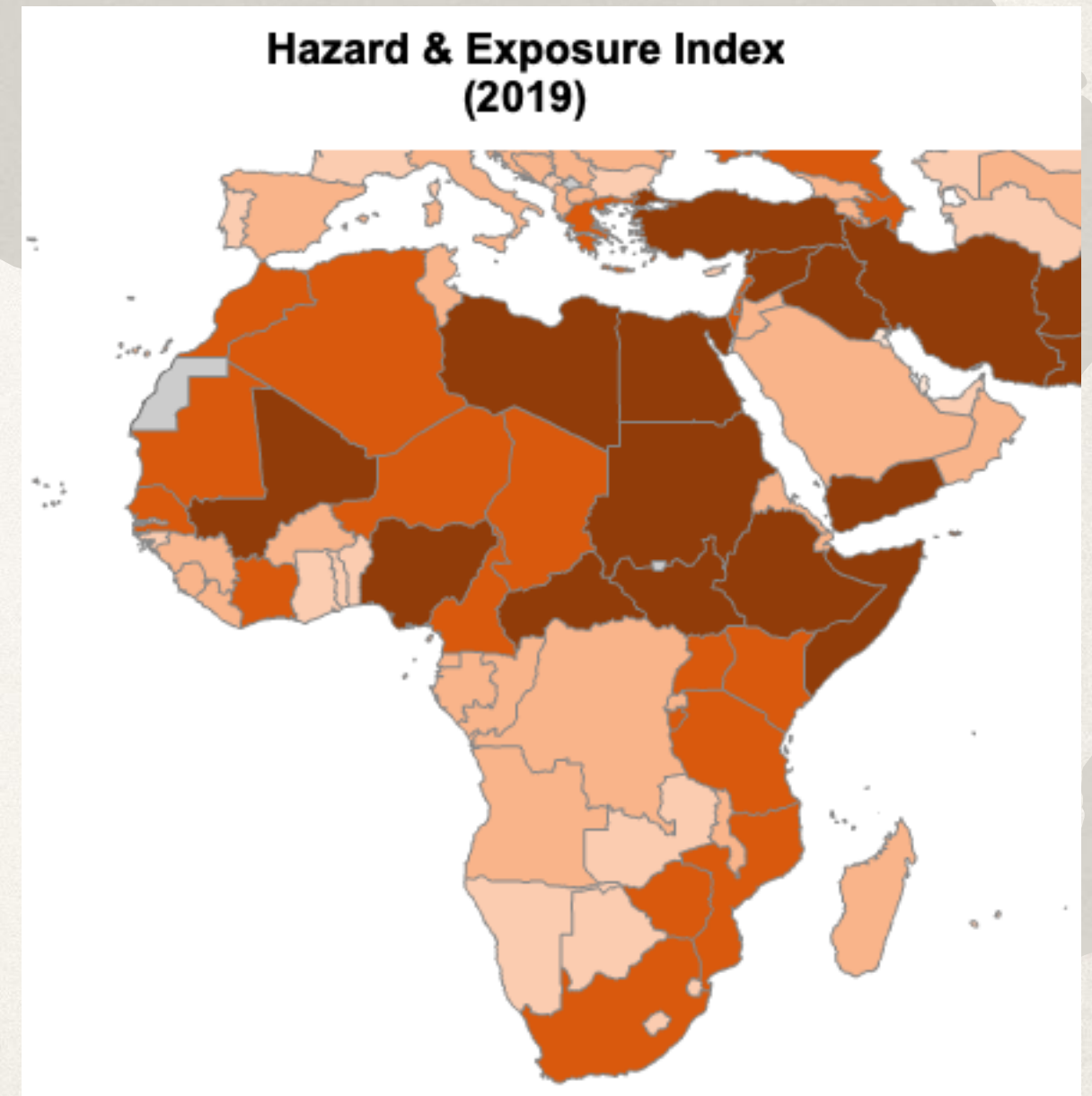


Darker red = more at risk



# INFORM - Hazard Index

REC	2015	2016	2017	2018
EAC	4,8	4,8	5,9	5,5
ECCAS	3,5	5,5	5,4	5,5
ECOWAS	2,7	2,7	3,6	3,7
IGAD	5,6	5,5	6,2	6,1
UMA	4,2	4,2	5,6	5,3
SADC	3,2	2,4	3,0	3,4

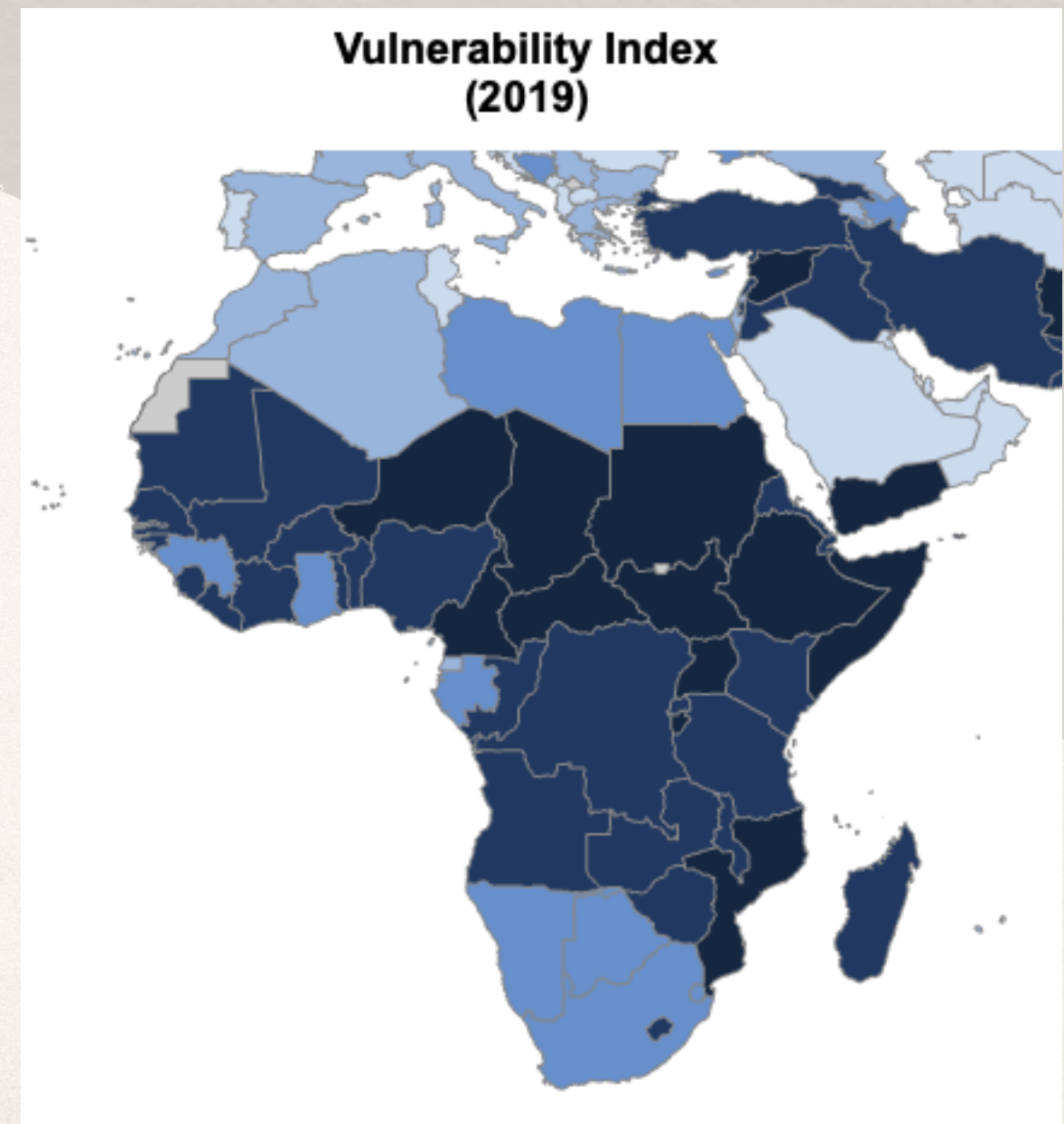


Darker brown = more hazards and exposure



# INFORM - Vulnerability Index

REC	2015	2016	2017	2018
EAC	6,3	6,6	6,5	6,5
ECCAS	3,5	5,5	5,4	5,5
ECOWAS	5,5	5,5	5,3	5,2
IGAD	6,6	6,9	6,8	6,8
UMA	3,5	3,4	3,3	3,3
SADC	4,8	4,8	4,6	4,7



Darker blue = more vulnerable



# INFORM - Capacity Index

**Lack of Coping Capacity Index  
(2019)**

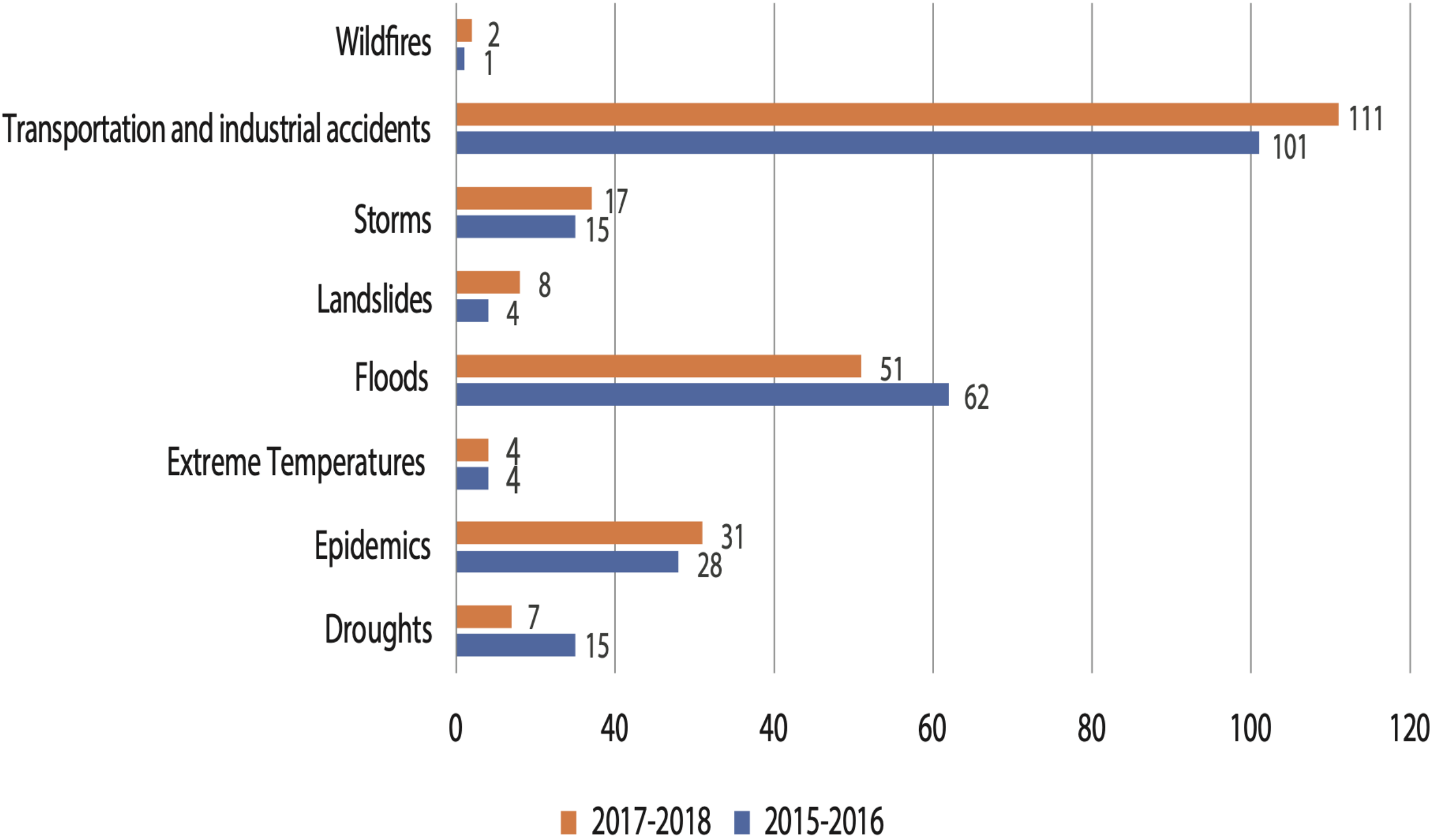


REC	2015	2016	2017	2018
EAC	6,9	6,8	6,8	6,8
ECCAS	5,4	7,0	6,9	6,9
ECOWAS	7,1	6,8	6,7	6,6
IGAD	7,7	7,6	7,5	7,5
UMA	5,9	5,8	5,7	5,6
SADC	6,2	6,1	5,9	5,9

Darker green = less coping capacity



**Figure 1: Selected recorded disasters in Africa (2015-2018)**

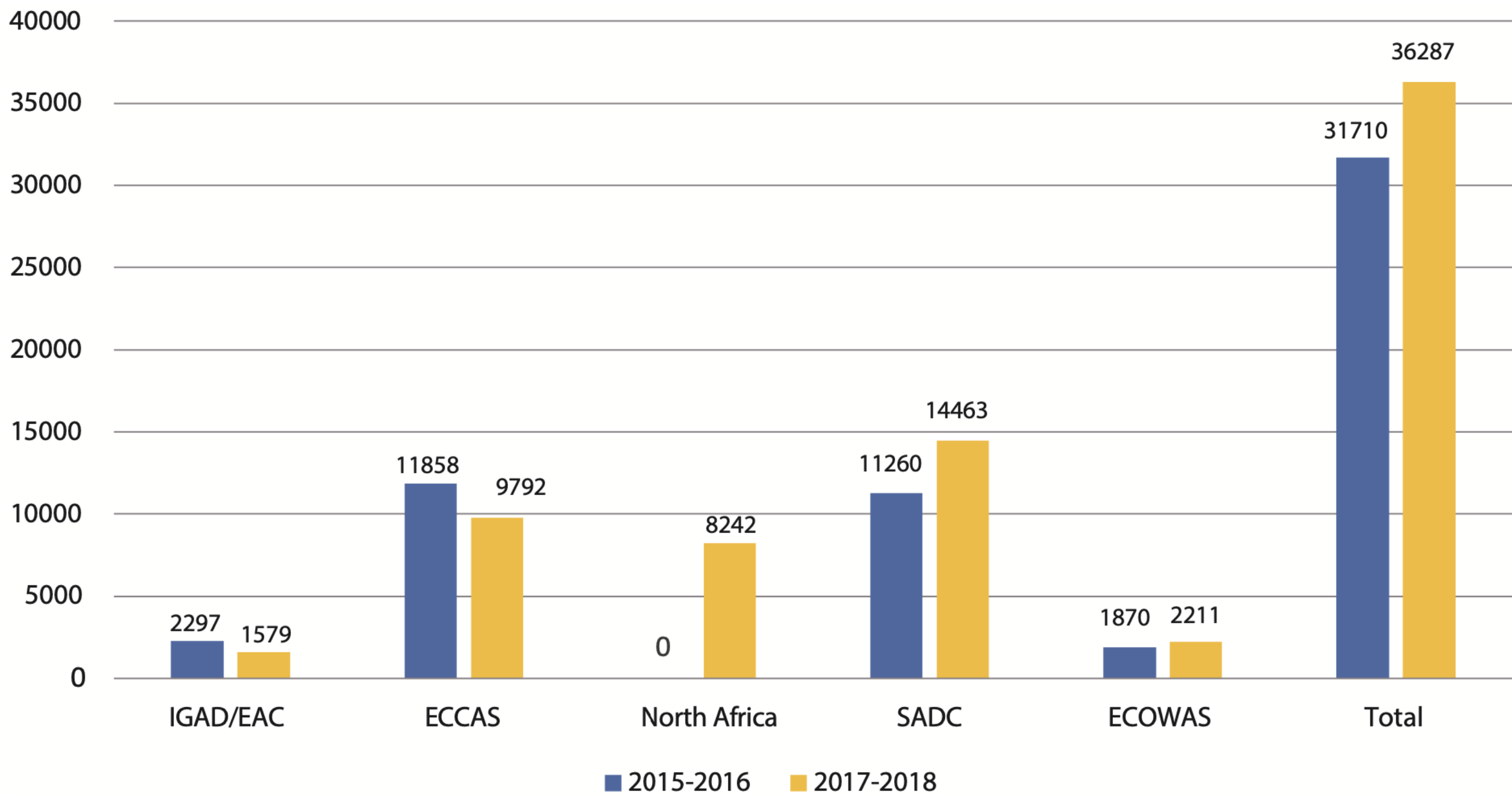


(Source: Member States' reporting on the SFDRR and PoA)



# SFDRR Target A: Reduce continental disaster mortality

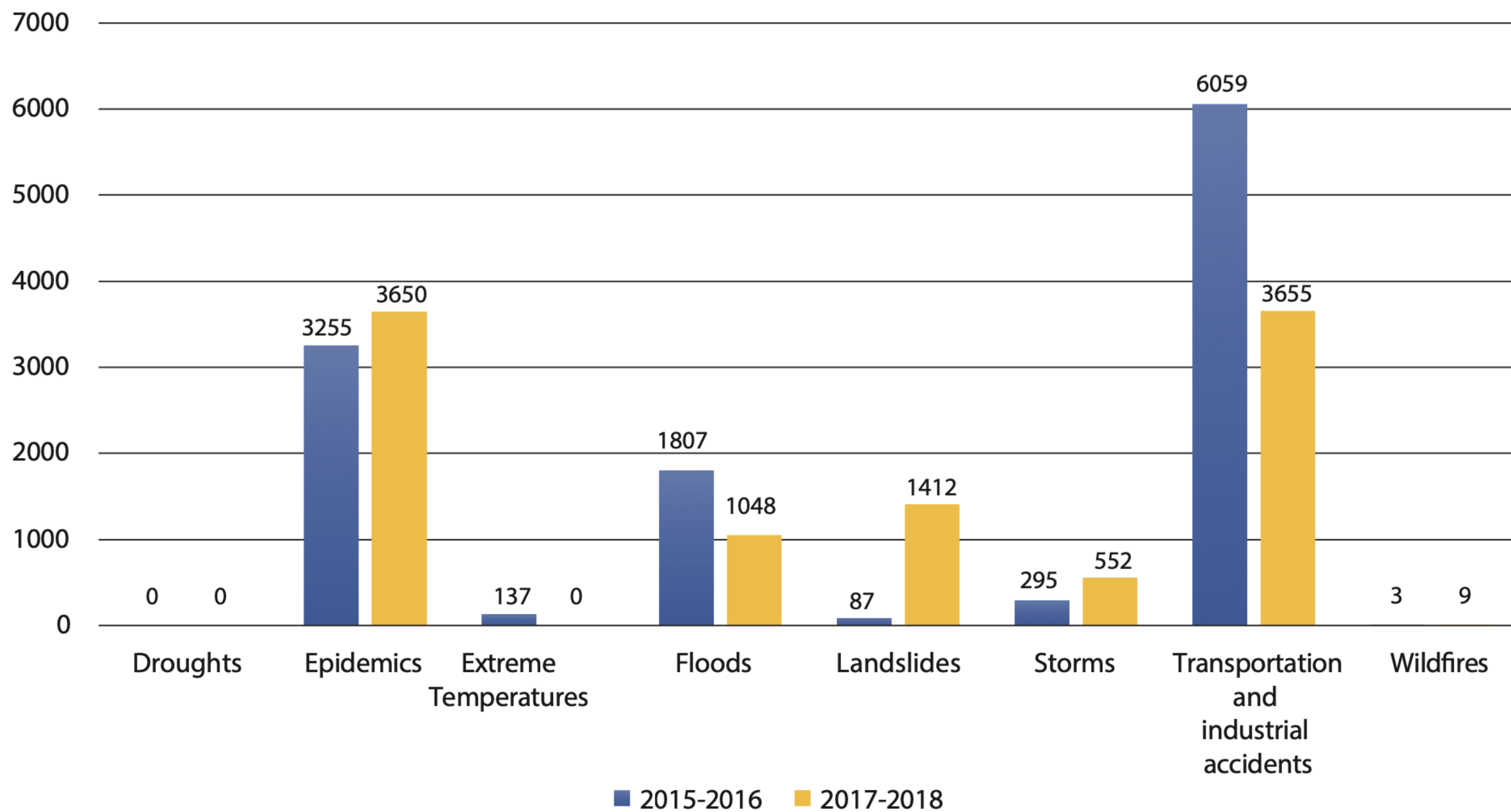
Figure 4: Disaster mortalities per REC (2015-2018)



(Source: Member States' reporting on the SFDRR and PoA EM-DAT: Emergency Events Database – Université catholique de Louvain (UCLouvain))



**Figure 5: Total deaths per selected disaster (2015-2018)**



(Source: Member States' reporting on the SFDRR and PoA)



## SFDRR Target B: Reduce the number of affected people

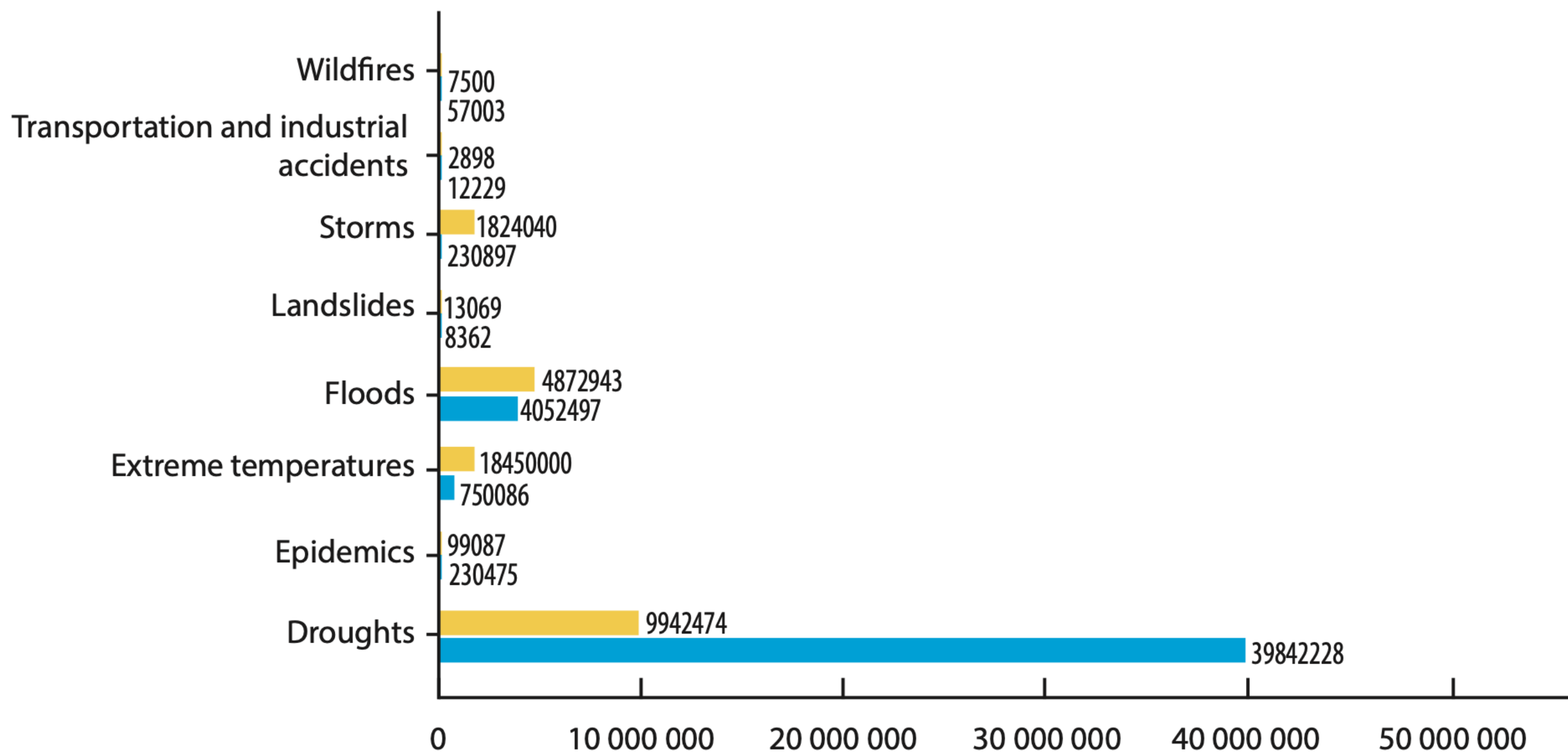
**Table 10: Number of affected per REC (2015-2018)**

REC	No. affected	
	2015-2016	2017-2018
IGAD	32 030 471	1 502 846↓
ECCAS	1 993 579	3 492 088↑
North Africa	758 902	6 020 355↑
SADC	20 811 703	7 146 549↓
ECOWAS	3 160 999	4 807 094↑
Total	58 755 654	22 968 932↓

(Source: Member States' reporting on the SFDRR and PoA EM-DAT: Emergency Events Database – Université catholique de Louvain (UCLouvain))



**Figure 6: Total affected people per selected disasters (2015-2018)**



(Source: EM-DAT: The Emergency Events Database - Université catholique de Louvain (UCLouvain); Member States' reporting on the SFDRR and PoA)

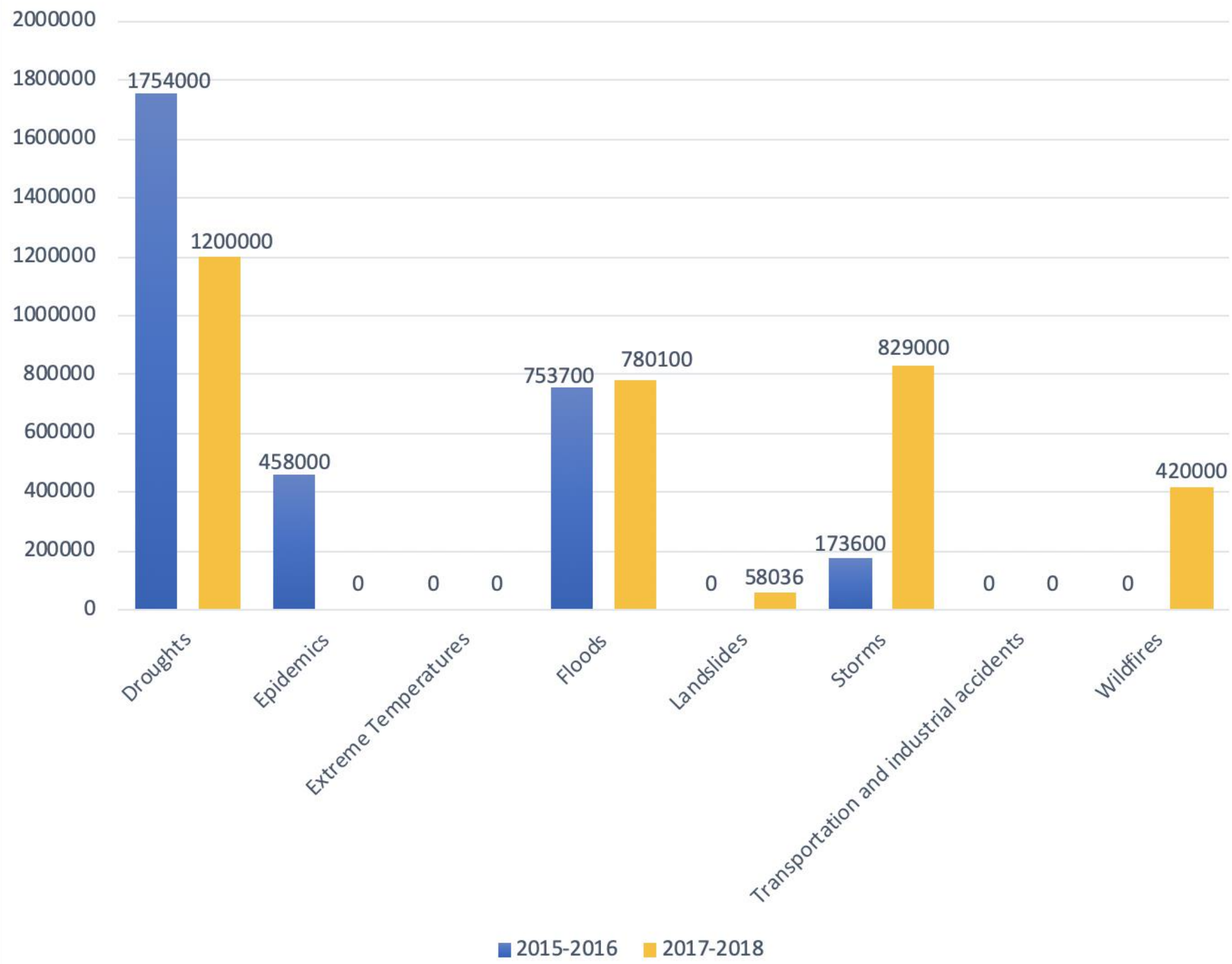


## SFDRR Target C: Reduce direct disaster economic loss

REC	No. of events		Total damage ('000 US\$)	
	2015-2016	2017-2018	2015-2016	2017-2018
IGAD/EAC	76	82↑	2 311 200	711 136↓
ECCAS	30	40↑	0	2 000↑
UMA	51	43↓	125 000	36 000↓
SADC	81	75↓	1 485 500	2 247 100↑
ECOWAS	53	54↑	69 100	315 000↑
<b>Total</b>	<b>291</b>	<b>294↑</b>	<b>2 505 300</b>	<b>1 064 136↓</b>



# Disaster losses (US\$ '000)





# PoA: Country self-assessments

Rating Key	Qualitative criteria
1	No achievement or non-existent
2	Limited achievement
3	Moderate achievement, neither comprehensive nor substantial
4	Substantial achievement, additional progress required
5	Comprehensive achievement



# PoA Country Dashboard

Algeria	Angola	Benin	Botswana	Burkina Faso	Burundi	Cameroon	Cabo Verde	CAF
n/a	1,1	2,7	2,3	2,0	2,4	2,9	n/a	1,6
n/a	1,1	3,4	2,7	2,4	3,1	3,1	n/a	2,9
Chad	Comoros	Congo	DRC	Cote d'Ivoire	Djibouti	Equatorial Guinea	Egypt	Eritrea
1,3	1,2	2,1	1,8	n/a	1,6	1,0	1,9	n/a
3,3	1,6	1,4	2,2	n/a	2,6	1,1	3,6	n/a
Eswatini	Ethiopia	Gabon	Gambia	Ghana	Guinea	Guinea-Bissau	Kenya	Lesotho
1,8	2,4	3	2,2	4	1,6	2,5	3,7	2,4
2,2	2,4	3	2,6	4	1,5	2,5	4	3,9



# PoA Country Dashboard

Liberia	Libya	Madagascar	Malawi	Mali	Mauritania	Mauritius	Morocco	Mozambique
1,9	n/a	1,4	3,8	3,3	1	n/a	1	2,4
2,9	n/a	2,1	4,1	3,3	1	n/a	1	3,4
Namibia	Niger	Nigeria	Rwanda	Saharawi Arab Democratic Republic	Sao Tome and Principe	Senegal	Seychelles	Sierra Leone
2,7	2,1	2,1	5	n/a	2,3	2	2	2,9
2,7	2,2	3,1	5	n/a	1,9	2,4	2,5	3,6
Somalia	South Africa	South Sudan	Sudan	Tanzania	Togo	Tunisia	Uganda	Zambia
1,2	3,7	n/a	3,2	3,4	2,2	2,1	2,1	1,6
1,2	3,8	n/a	4,1	3,8	2,8	2,8	3,4	1,5
				Zimbabwe				
				3,2				
				3,3				



# Challenges

- ❖ MSs find it difficult to generate and report disaster losses and other data (data management capacities and responsibilities).
- ❖ Losses are recorded across sectors with very little coordination (triangulation issues).
- ❖ DesInventar vs SFM vs EM\_DAT
- ❖ MSs mistrust in EM-DAT.
- ❖ Unknown reporting through various channels to EM-DAT (trustworthiness).
- ❖ Correlation with national statistics (validity).
- ❖ Disconnect between nations statistical organisation and DRR.
- ❖ Use regional centres of excellence at university/research entity level.