CLIMATE SECURITY IN THE SAHEL AND THE MEDITERRANEAN: LOCAL AND REGIONAL RESPONSES

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Climate Security in the Sahel and the Mediterranean: Local and Regional Responses

Foreword

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La Méditerranée relie l'Europe à l'Afrique. Le bassin méditerranéen est ainsi une zone d'interaction entre les deux continents. Cependant, il existe une perception qui limite le bassin méditerranéen à son sens géographique le plus strict, c'est-à-dire aux pays du Sud de l'Europe et à ceux d'Afrique du Nord, lesquels bordent la Méditerranée et sont liés par des caractéristiques climatiques, historiques et culturelles. Cette conception traditionnelle ignore le contexte géopolitique, qui élargit la vision du bassin méditerranéen en y incluant tous les espaces qui l'impactent.

Certains phénomènes humains, comme les migrations, nous montrent que les relations méditerranéennes ne concernent pas uniquement les États qui bordent cette mer, au nord comme au sud, mais un espace beaucoup plus vaste comprenant toute l'Union européenne, d'une part, et les pays nord-africains, sahéliens et subsahariens, d'autre part.

La présente étude a le mérite de tenir compte de la conception élargie de la Méditerranée. En ce sens, elle traite non seulement des effets du changement climatique sur les pays limitrophes de la Méditerranée, mais étend son analyse à l'ensemble de l'Union européenne (UE), au pays du Maghreb et surtout au Sahel, une zone très impliquée dans les développements futurs des relations et des interactions euro-méditerranéennes. En établissant un rapport entre le Sahel et l'espace méditerranéen, l'étude élargit le champ du diagnostic du changement climatique, car les problématiques posées au Sahel ont des effets immédiats sur l'Afrique du Nord et l'Europe.

De par sa géographie, son climat, sa démographie, les conflits qui y prolifèrent ou encore son niveau d'industrialisation précaire, la région du Sahel est la plus menacée au monde par le changement climatique. Un phénomène qui aggrave la situation de précarité dont souffre cet espace. Toute dégradation de la situation dans les pays du Sahel entraîne, à n'en pas douter, des retombées sur l'Europe et sur les relations entre celle-ci et l'Afrique.

L'Europe est, de par l'aide qu'elle apporte au pays du Sahel, directement impliquée dans le développement de cette région et, à ce titre, une partie de son action va à la lutte contre ce phénomène. D'autre part, toute aggravation de l'aspect sécuritaire au Sahel en raison du changement climatique constitue une menace pour la sécurité en Europe et cette dernière se doit de le prévenir.

Les quatre auteurs de l'étude, deux du sud et deux du nord de la Méditerranée, font le tour de la question du changement climatique dans la région du Sahel et des phénomènes qui lui sont liés tels que démographie, précarité, zones grises et

déplacement de population. Ils se penchent également sur son impact sur la stabilité de cette région et sur les effets que l'instabilité de l'espace sahélien pourrait avoir sur l'Europe (Bouchra Benhida et Amira Mohamed Abdelhalim). Les auteurs s'interrogent également sur les liens potentiels entre le changement climatique et la sécurité dans l'esprit européen. Ils exposent les positions et les cadres d'actions européens ainsi que les différentes initiatives prises par différentes instances européennes. Ils préconisent enfin des mesures qui doivent être prises de part et d'autre pour lutter contre les dangers afférents à ce phénomène (Patrícia Lisa et Niklas Bremberg).

Dans son chapitre où elle opte pour une conception du Sahel en tant qu'espace rassemblant cinq pays (Mauritanie, Mali, Niger, Tchad et Burkina Faso), Bouchra Benhida évoque les effets combinés du changement climatique et de la pression démographique dans cette zone. Elle touche deux aspects qui contribuent à dessiner le spectre de la sécurité alimentaire susceptible d'affecter la zone du Sahel ; une menace à laquelle s'ajoute le risque d'un climat social malsain où le chômage joue le rôle de détonateur de crise et de mouvements déstabilisateurs divers et multiples. Pour Mme Benhida, un dilemme se pose. D'un côté, la démographie galopante appelle à une nécessité de multiplication des moyens pour subvenir aux besoins alimentaires des pays de la zone sahélienne. De l'autre, sous l'effet des changements climatiques, les ressources alimentaires se tarissent. Cette disproportion entre le besoin pressant et toujours grandissant d'assurer la sécurité alimentaire d'une population en augmentation vertigineuse et les ressources qui vont en s'amenuisant sous l'effet des sècheresses et de la désertification crée au Sahel les conditions d'un déséquilibre qui déstabilise les pays de la région et qui va en s'aggravant.

Le chapitre de Benhida décrit les dynamiques démographiques dans la région et souligne leur caractère exponentiel ; il donne également un état des lieux de l'ampleur des changements climatiques et de leurs effets ; ceci avant d'aboutir aux impacts de leur combinaison, facteur aggravant d'une situation déjà précaire. L'auteur souligne que le risque qu'encoure le Sahel du fait de sa situation présente et du développement dû au changement climatique et à la poussée démographique ne saurait être limité à la zone du Sahel. Ce risque aura des effets certains sur le Maghreb et l'Europe ; ces trois zones étant caractérisées par une forte interdépendance. Elle appelle ainsi à une concertation entre tous, de manière permanente, pour concevoir et mettre en place les réponses appropriées.

Dans son chapitre consacré à la relation entre l'apparition de zones de non-droit, appelées « zones grises », Amira Mohamed Abdelhalim remarque que la hausse des

températures et les vagues de sécheresse récurrentes ont eu de graves conséquences sur les moyens de subsistance de la population du Sahel. De plus, l'incapacité des gouvernements locaux à faire face au changement climatique et à fournir un soutien à la population locale a conduit à l'émergence de « zones grises » exploitées par des groupes organisés et criminels, lesquels ont trouvé d'importantes opportunités de renforcer leur présence. L'auteur s'appuie, pour renforcer sa constatation, sur des études de cas qui indiquent que « les zones les plus touchées par les changements climatiques et les plus couramment utilisées par les groupes terroristes et le crime organisé peuvent être divisées en zones septentrionales proches du Sahara ou intégrées au secteur climatique des déserts arides, qui sont les plus touchés par les changements climatiques ».

La zone du Sahel, qui souffre déjà de conditions géographiques et climatiques défavorables, semble s'enfoncer de plus en plus, non seulement dans la précarité, mais également dans l'insécurité, en raison de l'implantation des terroristes et des criminels dans les zones où les États reculent du fait que ces espaces sont désertés en raison du changement climatique. Le changement climatique, qui favorise l'installation dans des zones de non-droits de groupes terroristes et criminels, accroît ainsi l'insécurité.

Les conséquences des changements climatiques sur la sécurité et l'apparition de ces zones grises ne limitent pas leurs effets au seul Sahel. L'Afrique du Nord et l'Europe pourront à l'avenir souffrir des conséquences de ces phénomènes. Pour l'auteur, la prévention contre les effets combinés des zones grises et du changement climatique est un défi auquel doivent faire face, non seulement les Sahéliens, mais également leurs voisins nord-africains et européens, et même toute la communauté internationale. Amira Mohamed Abdelhalim ne tarde pas à attirer l'attention sur le fait qu'aujourd'hui, les Nations unies, l'Union européenne et le G-7 définissent le changement climatique comme une menace pour la sécurité mondiale et nationale, même si la relation directe n'est pas encore avérée. À travers l'émergence de zones grises qu'il favorise, le changement climatique peut, à défaut d'être reconnu comme cause direct d'insécurité, être au moins confirmé comme « multiplicateur de menaces », qui interagit avec et aggrave les risques.

Patricia Lisa signale d'emblée le lien étroit - malgré l'absence d'indices directs - entre les préoccupations relatives au changement climatique et celles afférentes aux déplacements forcés de population. Pour traiter de ce lien potentiel, l'auteure s'est penchée en premier lieu sur l'examen du Pacte mondial pour la migration (MCG) des Nations unies en tant que « premier et principal instrument mondial sur la migration, afin de clarifier la portée, les limites et les effets potentiels sur la gouvernance du lien entre migration et changement climatique ». Elle relève ensuite le cas de certaines régions

d'Afrique où le lien entre les deux phénomènes paraît se confirmer. Elle donne l'exemple de la Corne de l'Afrique et du Sahel, où des facteurs environnementaux alliés à la dégradation des moyens de subsistance viennent aggraver la situation des populations, non seulement à cause du tarissement des ressources naturelles, mais également en raison de l'installation facilitée des groupes extrémistes. Les populations s'en trouvent condamnées aux déplacements forcés faute de sécurité alimentaire et physique.

Pour l'Union européenne, le changement climatique n'a pas de lien direct avéré avec les migrations vers l'Europe. Il est seulement un facteur parmi d'autres. L'Union traite donc des deux questions dans des cadres différents, n'étant pas convaincue qu'elles soient systématiquement liées. C'est pour cela que l'auteure propose d'envisager la nécessité de lier systématiquement les agendas du changement climatique et de la migration dans les dialogues entre l'UE et les pays partenaires dans le cadre d'un voisinage élargi. Les instruments et agendas existants à propos du changement climatique et des migrations doivent s'articuler autour de trois axes fondamentaux visant à réduire les risques, l'exposition et la vulnérabilité. Selon l'auteure, les outils correspondants sont en place et doivent être systématiquement combinés dans une approche multisectorielle et transversale. Patricia Lisa insiste sur la nécessité d'inscrire les déplacements liés au changement climatique dans les politiques de migration et d'entamer la combinaison des stratégies d'adaptation positives en plus de l'objectif consistant à fixer les personnes sur leurs territoires.

Dans son analyse de la question, Niklas Bremberg étend son étude à l'ensemble des dégradations sécuritaires dues au changement climatique et trouve que les aspects sécuritaires découlant du changement climatique sont de plus en plus reconnus par l'UE et ses États membres. Il est donc probable qu'une évaluation du risque climatique ne tardera pas à être intégrée dans les systèmes d'alerte précoce de l'UE. L'auteur évoque ainsi les débats surgis ces dernières années, afin de déterminer l'existence de liens potentiels entre le changement climatique et les migrations internationales, notamment pour savoir si les premiers augmenteraient les seconds et, en cas de réponse affirmative, se décider si les personnes victimes des effets sinistres du changement climatique devraient être admises dans la catégorie de celles bénéficiant d'un statut de réfugié. Si l'analyse élaborée par Niklas confirme que l'augmentation du flux des migrants est due aux effets du changement climatique, force est de constater que les personnes qui se déplacent le font généralement au sein même de leur pays ou de leur région. L'auteur remarque, cependant, que cela pourrait changer à l'avenir si les effets néfastes du changement climatique sont fortement exacerbés dans la région du Sahel. Et, même si la probabilité d'un mouvement soutenu de ces personnes vers le Nord de l'Afrique et de

l'Europe reste faible pour le moment, ce risque doit être pris en compte par les gouvernements nationaux.

L'analyse présentée dans ce chapitre suggère également que l'UE devrait renforcer sa capacité d'évaluation des risques climatiques, notamment dans le cadre de son système d'alerte rapide pour la prévention des conflits. Pour l'auteur, les résultats du rapport récent du Groupe d'experts intergouvernemental sur l'évolution du climat [GIEC] (2018), qui suggère notamment une augmentation de l'intensité et de la fréquence des sécheresses, imposent à l'UE une intensification de son soutien au renforcement de la résilience dans les pays du Sahel, notamment dans les domaines de la foresterie et de l'agriculture.

En prenant connaissance des différentes conclusions des auteurs, la conviction se fait grande que le changement climatique peut se combiner avec d'autres facteurs et les multiplier ou les aggraver pour en faire un grand défi à la sécurité. D'autre part, la région du Sahel, qui se trouve très vulnérable au changement climatique, impacte la région méditerranéenne aussi bien au Sud qu'au Nord, en exacerbant, notamment, le phénomène de déplacement des populations et en instaurant un climat favorable à l'expansion des groupes terroristes et mafieux. La responsabilité de la lutte est donc commune à un espace méditerranéen élargi, qui ne se limite pas au seul bassin méditerranéen, mais qui interpelle également ses voisins.

Pression démographique et changement climatique : impacts et difficultés au Sahel

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Le Sahel, mot importé de la langue arabe qui signifie « rivage », représente un espace marqué par la sécheresse et l'aridité. Connue pour sa mixité culturelle, économique et sociale, la région du Sahel est définie non seulement géographiquement, mais aussi géopolitiquement.

La définition géographique implique le fait que le Sahel est une bande qui traverse toute l'Afrique moyenne, de l'Océan Atlantique à la mer Rouge, sur un territoire d'environ 5 500 kilomètres de long sur 400 à 500 kilomètres de large, entre le désert et la savane, de type soudanien. Elle recouvre 12 pays (dans leur totalité ou en partie) : la Mauritanie, le Sénégal, la Gambie, le Mali, le Burkina Faso, le Niger, le Nigeria, le Tchad, le Soudan, l'Éthiopie, l'Érythrée et Djibouti.

D'un point de vue géopolitique, le Comité permanent Inter-États de Lutte contre la Sécheresse dans le Sahel (CILSS) comprend dans le Sahel non seulement les 12 pays déjà cités, mais aussi les îles du Cap-Vert, la Guinée Bissau, la Guinée, la Côte d'Ivoire, le Bénin, et le Togo, tous ces pays partageant la même histoire coloniale (CILSS, n.d.).

Pour sa part, l'Union européenne a adopté une définition plus étroite de cette région avec la Mauritanie, le Mali et le Niger en tant qu'États sahéliens principaux, auxquels viennent s'ajouter deux autres pays : le Burkina Faso et le Tchad (Service européen pour l'action extérieure [SEAE], 2016). Et c'est cette définition qui sera retenue pour la présente analyse.

La pression démographique et les facteurs environnementaux que connaît la région aggravent les conflits liés à la rareté des ressources et demeurent des multiplicateurs de l'insécurité humaine au Sahel.

Tous ces facteurs font de la région un « arc de crise » marqué par d'importants flux migratoires vers le Maghreb et les pays de la Méditerranée et affecté par une série de facteurs politiques, socio-économiques et environnementaux tels que la mauvaise gouvernance, la pauvreté, le sous-développement et le changement climatique. Le mouvement de migration que connaît la région – interne ou entre les pays – s'amplifie à cause de la vulnérabilité des pays du Sahel aux conséquences du changement climatique. Une telle situation pourrait engendrer et/ou accentuer les difficultés socio-économiques, voire sécuritaires dans les régions de transit ou de destination.

Les menaces qui pèsent sur la paix et la stabilité des pays du Sahel sont dues à des causes profondes qui relèvent de la relation entre les phénomènes démographiques et

les économies de ces pays. L'accroissement rapide de la population au Sahel, en l'occurrence dans le milieu rural, alimente, généralement :

- les tensions entre agriculteurs et éleveurs,
- la rupture d'équilibre entre la taille de la population et la capacité de l'agriculture,
- la concentration du capital terre et bétail,
- et l'essor démographique.

Dans ce chapitre, l'état des lieux et le double impact de la croissance démographique et du changement climatique sur la population sahélienne sont mis en lumière.

Changement climatique et pression démographique au Sahel : contexte d'évolution et état des lieux

Le Sahel est classé aujourd'hui parmi les espaces les plus fragiles au monde. L'évolution démographique met la région face à des défis redoutables qui ne manqueront pas de se multiplier, notamment en termes d'insécurité alimentaire, de migration massive et de situation économique difficile.

Rôle des dynamiques démographiques dans l'aggravation des turbulences au Sahel

Contrairement aux autres régions du monde, le Sahel passe par une phase de croissance démographique sans précédent, qui va plus que doubler à l'horizon de 2100. Une telle croissance démographique va avoir d'énormes conséquences sur les pays de la région, en termes de développement socio-économique et, par ricochet, en termes de stabilité et de sécurité.

Comparée au reste de l'Afrique, la région du Sahel continue d'enregistrer une augmentation massive de sa population, à tel point qu'elle est qualifiée de « bombe démographique » (Garenne, 2016). La répartition spatiale non équilibrée de la population sur la zone sahélienne décrit des densités de peuplement et des rythmes de croissance qui varient d'un pays à l'autre ainsi que des pressions qui s'exercent sur les terres agricoles et sur les sources d'énergie.

Forte croissance démographique à l'horizon de 2100

La population du Sahel[1] est estimée aujourd'hui à 85 millions d'habitants et connaît un taux annuel d'accroissement démographique oscillant entre 2,5 % et 4 %. Cet accroissement est dû aux diminutions rapides de la mortalité infantile et juvénile,

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1 L'aire sahélienne telle que définie par l'UE (Mauritanie, Niger, Tchad, Burkina Faso, Mali).

combinées avec un taux de fécondité élevé, qui varie de 4,1 à 7,6 enfants par femme en moyenne (Département des affaires économiques et sociales des Nations Unies [DAES], 2017).

Avec ces niveaux et ces tendances en termes de fécondité, la population de la région sahélienne pourrait doubler pour passer à 203 millions d'habitants en 2050 et atteindre presque 470 millions d'habitants en 2100, selon les prévisions de la Banque mondiale (voir tableau 1).

Avec un total de 4,8 % de la population mondiale, le Sahel occupera le premier rang des régions les plus peuplées au monde en 2100 et sera à l'origine d'un tiers de la croissance de la population mondiale, dont la première place sera attribuée au Niger avec un total de 209,3 millions d'habitants (voir tableau 1).

Tableau 1 : données démographiques sur la population du Sahel

Pays	Population en millions (2018)	Projection 2050	Projection 2100	Taux annuel d'accroissement % (2018)	Densité de la population 2018 (habitants/km²)	Indice de fécondité - Naissances/ femme (2015)
Burkina Faso	19,8	42,8	81,0	3,1	71,3	5,44
Tchad	15,5	35,1	68,9	3,3	11,41	6,05
Mali	19,2	45,4	93,0	2,9	15,53	6,14
Mauritanie	4,3	8,04	13,1	2,6	4,24	4,54
Niger	22,4	72,2	209,3	3,9	17,72	7,57

Source : Tableau conçu sur la base d'une compilation de données des Nations Unies – Département des Affaires économiques et sociales, Division de la Population. Perspectives de la population mondiale 2015.

La poussée démographique de la jeunesse au Sahel, mesurée sur la base de la proportion des jeunes entre 15-29 ans, est de 26 % en 2018 et passera, d'après les prévisions, à 28 % vers 2030 pour diminuer lentement par la suite et atteindre 23 % à l'horizon de 2100 (DAES, 2017).

Sur le plan de l'emploi, la situation n'a pas cessé de s'aggraver au cours des dernières années. Atteignant en moyenne 12,5 %, le chômage des jeunes reste anormalement élevé au niveau des pays du Sahel (voir tableau 2).

Les défis de la région en termes de création d'emplois se résument à l'adéquation entre les postes créés par le secteur formel de l'économie et le nombre de jeunes qui arrivent

sur le marché du travail annuellement. L'absence d'emplois stables et formels pour les jeunes Sahéliens les met dans des situations de sous-emploi (secteur informel, fermes ou entreprises familiales). Cette situation représente un énorme facteur de risque politique et économique puisque cette tranche de la population, confrontée à la précarité de l'emploi, est la plus susceptible d'être attirée par des groupes terroristes et de contribuer à l'instabilité de la région.

Tableau 2 : chômage, total des jeunes (% de la population active âgée de 15 à 24 ans)

Pays	Mauritanie	Mali	BurkinaFaso	Niger	Tchad
%Chômage	17,93	17,96	8,56	8	10,14

Source : Tableau conçu sur la base d'une compilation de données modélisées de l'année 2018 de l'Organisation Internationale du Travail (Banque mondiale [BM], 2018)

Les évolutions démographiques des pays de l'Afrique subsaharienne, moteur de la croissance démographique mondiale au XXIe siècle, sont très diverses. Alors que les pays de l'Afrique australe sont en train d'achever leur transition démographique avec un affaiblissement de leurs taux de mortalité et de fécondité, les pays du Sahel, eux, continuent d'enregistrer des niveaux de fécondité très élevés, et accusent ainsi un retard dans leur transition démographique (Guengant & May, 2011).

Caractéristiques de la transition démographique des pays du Sahel
L'accélération de la transition démographique[2] au Sahel apparaît comme une condition nécessaire au progrès de la région vu qu'elle influence directement le changement de la structure par âge de la population.

La population est ainsi augmentée par le multiplicateur transitionnel de population, lequel dépend de la durée de la transition, c'est-à-dire du temps écoulé entre le début, la fin et la hauteur de la transition caractérisée par le maximum de croissance de la population (Chesnais, 1979). Les trois facteurs explicatifs du niveau du multiplicateur transitionnel de population sont la vitesse de la baisse de la mortalité, le délai de réaction de la natalité et la vitesse de la baisse de la natalité (inférieure à 3, comme c'est le cas en France, et supérieure à 30 tel que relevé dans de nombreux pays africains : Congo, Ouganda, Tanzanie, Zambie).

Aujourd'hui, la moyenne du nombre d'enfants par femme dans la région du Sahel oscille entre 4,1 et 7,6 enfants (DAES, 2015). Cela prouve que la transition démographique suit son cours avec un rythme encore lent.

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2 La transition démographique est définie par le passage d'un état de quasi-équilibre à forte fécondité et mortalité à un autre état de quasi-équilibre à faible fécondité et mortalité.

Si l'on prend, par exemple, le Niger, pays dont le taux de fertilité est le plus élevé au monde (de 7,6 %, dont 8,1 % en milieu rural), la population totale est passée de 10 millions, en 2001, à 22.4 millions en 2018 et pourrait atteindre 209.3 millions en 2100, selon les prévisions de la Banque mondiale. Les conséquences de cette rapide croissance sur le plan socio-économique se font sentir dans un contexte régional de sècheresse.

Le Programme des Nations Unies pour le Développement (PNUD) démontre dans son étude, parue en 2015, qu'il y a une corrélation entre un taux élevé de fécondité et la pauvreté, particulièrement pour les pays dont l'indice de développement humain (IDH) est très bas. Ce qui semble être le cas pour le Niger, qui se situe au dernier rang de l'IDH avec un indice de PIB/habitant de 378 USD par an, l'un des moins élevés au monde (PNUD, 2015).

Retombées de la densité de la population sahélienne sur les ressources naturelles
La disponibilité limitée des ressources planétaires telles que les terres arables, l'eau potable, les forêts et les richesses de la mer, est devenue l'un des principaux sujets de préoccupation actuels. À ce stade, il convient de rappeler, et ce à juste titre, que la densité de la population a un impact important sur l'environnement (Hunter, 2001). Deux domaines spécifiques illustrent la complexité de l'influence des dynamiques démographiques et de la densité de la population sur l'environnement, il s'agit des schémas d'occupation des sols et des changements climatiques de la planète.

Dans le cas des pays du Sahel, et du fait qu'ils sont en majorité désertiques, la densité de la population n'est pas calculée en prenant en compte la superficie totale de la région, mais celle des terres agricoles.

D'après les données de l'Organisation des Nations Unies pour l'Alimentation et l'Agriculture (FAO), 30,4 % des terres au Sahel sont consacrées à l'élevage et environ 7,1 % sont destinées à l'agriculture (FAO, 2016). Ce qui implique une forte densité de population par km² au Sahel : 213 habitants par km² de terre arable et 51 habitants par km² de terre d'élevage.

De surcroît, la FAO avance que l'élevage serait l'une des principales causes des problèmes environnementaux que connaît la région, comme le réchauffement climatique, la dégradation des terres, la pollution de l'atmosphère et des eaux et la perte de biodiversité. Ainsi, la FAO a estimé que l'élevage est responsable de 18 % des émissions de gaz à effet de serre, auxquelles s'ajoute un grand impact sur l'utilisation et la qualité

de l'eau et sur les écosystèmes aquatiques. La production animale consomme plus de 8 % des utilisations humaines d'eau à l'échelle mondiale et dans les régions à faibles ressources hydriques. La quantité d'eau utilisée pour la production animale pourrait dépasser celle servant à satisfaire les besoins alimentaires des humains (FAO, 2016).

Impact des dynamiques démographiques sur l'évolution économique et environnementale du Sahel

Le produit intérieur brut (PIB) de la région du Sahel est relativement faible, entre 370 dollars à moins de 3 000 dollars par tête (BM, 2018). Les pays du Sahel sont restés très pauvres par rapport aux autres pays d'Afrique (voir tableau 3).

Tableau 3 : produit intérieur brut par habitant dans les pays du Sahel

Pays	Mauritanie	Mali	Burkina Faso	Niger	Tchad
PIB/habitant (USD)	1136,76	824,52	670,71	378,06	669,89

Source : Tableau conçu sur la base d'une compilation de données de la Banque mondiale de l'année 2017.

Le rôle des dynamiques démographiques peut être qualifié de négatif dans les évolutions économiques et environnementales de quelques pays du Sahel (Garenne, 2016). En effet, l'augmentation de la population entraîne une pression agricole plus forte sur :
- les terres, pour répondre aux besoins alimentaires et pour décupler la productivité des terres cultivées,
- les ressources ligneuses utilisées comme énergie domestique,
- les dépenses annuelles croissantes des secteurs de l'éducation et de la santé,
- et la création d'emplois.

Les évolutions démographiques transforment à la fois le nombre et la structure par âge des actifs, ce qui affecte l'offre de travail dans un pays. Ainsi, le rapport de dépendance (poids des inactifs sur les actifs)[3] est impacté par les évolutions de la structure par âge. Ce rapport a été particulièrement élevé en 2015, atteignant 0,98 au Sahel contre 0,84 dans les autres pays africains et 0,48 dans le reste du monde (Fonds des Nations Unies pour la population [FNUAP], 2015).

Au Niger, qui dispose du plus grand taux annuel d'accroissement démographique au Sahel, les moins de 15 ans (économiquement inactifs) constituent plus de 50 % de la population. Dans ce cas, la production économique et le PIB par habitant ne peuvent être que faibles (voir tableau 3).

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3 Inactifs : (moins de 15 ans et 65 ans et plus) – Actifs : (entre 15-64 ans).

D'ailleurs, les bas revenus figurent parmi les principales raisons qui font que les pays du Sahel soient classés comme les moins attrayants pour les affaires et décrits comme des États fragiles (BM, 2017).

Face à la croissance de la population et face aux taux élevés de fécondité et de dépendance des jeunes (charge économique qui pèse sur les personnes actives, les familles et les gouvernements, et freine la croissance économique), les États des pays du Sahel doivent assurer une meilleure gestion de la fécondité et une réduction des inégalités de genre, et ce à travers l'autonomisation des femmes, l'amélioration de l'utilisation des services de santé reproductive, particulièrement les services de planification familiale volontaire, la promotion de la scolarisation des filles et l'acquisition de compétences pratiques pour les femmes.

Des initiatives allant dans ce sens ont pris place au Sahel, dont l'initiative régionale « Autonomisation des Femmes et Dividende démographique au Sahel » (novembre 2015), fruit d'une réponse conjointe du Fonds des Nations Unies pour la Population (UNFPA) et du Groupe de la Banque mondiale à l'appel lancé par les présidents de six pays du Sahel : le Burkina Faso, la Côte d'Ivoire, le Mali, la Mauritanie, le Niger et le Tchad. L'objectif global du projet étant d'accélérer la transition démographique, de déclencher le dividende démographique et de réduire les inégalités de genre dans la région du Sahel.

Nature et ampleur du changement climatique au Sahel

Les impacts négatifs du changement climatique lui confèrent le statut de menace de premier plan pour la stabilité des différentes régions du monde, en l'occurrence le Sahel, caractérisé par l'extrême variabilité saisonnière et décennale des précipitations. Dès lors, l'aggravation d'une telle situation mettrait la communauté africaine et méditerranéenne face à l'une des plus grandes préoccupations sécuritaires du XXIe siècle : les migrations dues à la violence et aux aléas climatiques.

Si les émissions mondiales de gaz à effet de serre continuent à progresser à leur rythme actuel, la surface de la Terre est susceptible de connaître une élévation des températures de l'ordre de 4,5° C à 5° C à l'horizon de 2100.

Évolution climatique dans la région du Sahel

Le changement climatique reste le principal facteur de risque des crises environnementales au Sahel, dont l'économie repose sur un système de culture pluviale. L'aire sahélienne fait face aujourd'hui à des crises alimentaires chroniques, ce qui

consacre davantage la précarité pour les tranches les plus pauvres de la population sahélienne.

L'évolution climatique au Sahel a été défavorable au XXᵉ siècle avec une extension du Sahara vers le sud et une baisse de la pluviométrie. Les pays du Sahel sont en effet caractérisés par un climat semi-aride avec deux saisons bien précises : une saison sèche, qui dure environ 8 à 9 mois (octobre à juin), et une saison des pluies, qui ne dépasse pas les 3 à 4 mois (juillet à fin septembre) (Balme, Galle & Lebel, 2005).

Le changement climatique est aussi à l'origine de l'augmentation de la fréquence des tempêtes extrêmes décrites comme les plus explosives de la planète et qui ont plus que triplé durant ces 35 dernières années au Sahel (Taylor et al., 2017). Ces tempêtes sont à l'origine d'inondations dans les villes de la région. Ainsi, la moitié de la ville d'Ouagadougou a-t-elle été touchée par des inondations en 2009, avec 150 000 personnes affectées, 250 maisons et 670 classes d'écoles détruites (Soulama, 2009).

L'intensité des pluies et des orages sur des épisodes courts et soudains implique que l'eau ne pénètre pas dans la terre, mais accroît l'érosion des sols et leur fait perdre leurs nutriments. Les pluies au Sahel deviennent alors de moins en moins efficaces pour l'agriculture dans l'espace sahélien.

De plus, les grandes vagues de sécheresse que connaît le Sahel depuis le début du siècle dernier, et qui, par conséquent, ont accentué le caractère désertique de cette région, constituent une réelle menace pour l'environnement. Le lac Tchad, à la frontière du Niger, du Tchad, du Cameroun et du Nigeria, a vu sa surface divisée par 10 depuis les années 1960, du fait notamment de sécheresses répétées (Lavergne, 2017).

Tendances des précipitations et sécheresse au Sahel
Au Sahel, zone relativement sèche et semi-aride, les précipitations varient tous les ans. Au nord, elles oscillent entre 100 et 250 millimètres de pluies et au sud entre 400 et 500 millimètres. Le climat du Sahel s'est toujours caractérisé par l'extrême variabilité saisonnière et décennale des précipitations (Heinrigs, 2010).

Les indices standardisés des précipitations (figure 1) permettent de comparer les sous-régions sur un nombre d'années précis. On remarque dans le cas de deux sous-régions du Sahel (Sénégal et Niger moyen) une phase humide durant deux décennies, 1950-1970, puis une longue période sèche qui lui a succédé, de 1970 à 1990, et ensuite, une lente augmentation des pluies, de 1990 jusqu'à nos jours (Descroix et al., 2015).

Figure 1 : évolution de l'indice pluviométrique pour la Sénégambie et le bassin du Niger moyen

Figure 2 : évolution de la pluviométrie annuelle à Dakar fin 2015
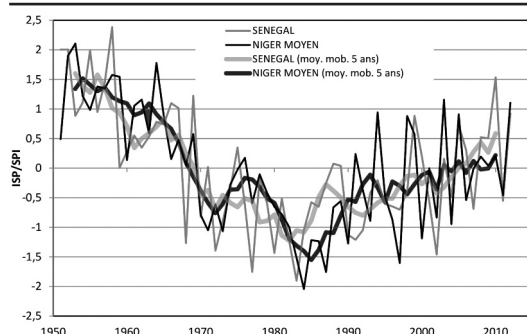
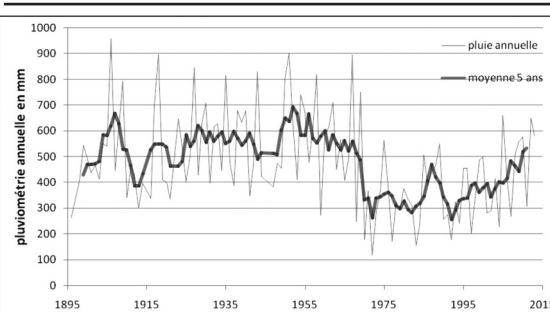Sources : Descroix et al., 2015.

La diminution des précipitations durant la période 1970-1990, puis leur forte intensité après 1995, ont concerné davantage la zone littorale du Sahel que la zone intérieure (Dacosta, Konate & Malou, 2002). On peut en conclure que les abords de l'océan Atlantique sont les plus touchés par l'aridification du climat.

La figure 2 explique l'évolution de la pluviométrie annuelle à Dakar de 1895 à 2015, caractérisée par une baisse de la pluviométrie et la présence d'une rupture nette de stationnarité après 1968.

Les capitales sahéliennes se trouvent face à une problématique qui intègre les effets du changement climatique. En effet, le risque d'inondation et de crues a augmenté avec le retour de pluies plus intenses et un retard de la mousson dans plusieurs régions de l'Afrique sahélienne.

Il existerait donc deux éléments qui expliquent respectivement l'augmentation de la fréquence des inondations et la baisse des rendements agricoles dans la région : l'accroissement de l'intensité des précipitations et la diminution de la durée de la saison des pluies. Un tel cadre climatique combiné avec la situation de forte croissance démographique que connaît la région du Sahel va conduire à une pression de plus en plus importante sur les ressources naturelles et va aggraver l'insécurité alimentaire et humaine (Programme des Nations Unies pour l'Environnement [PNUE], 2011).

Projections climatiques au Sahel à l'horizon de 2100

Le continent africain, en l'occurrence le Sahel, est susceptible d'être dans le futur plus chaud et plus sec, de connaître des inondations plus fréquentes et des phénomènes

météorologiques extrêmes (cyclones tropicaux, élévation du niveau de la mer, hausse des tempêtes…) (Ali, 2010).

Les climatologues prévoient que les pluies vont devenir plus imprévisibles et que la température du Sahel va augmenter de 3 à 5 degrés Celsius d'ici à 2050 et de presque 8 degrés Celsius en 2100.

D'après l'Organisation des Nations Unies pour l'Alimentation et l'Agriculture, une baisse de la production agricole est prévue : de 13 % au Burkina Faso à presque 50 % au Soudan. D'ici 2020, entre 75 et 250 millions de personnes seront exposées à des déficits en eau et 75 millions d'ha de terres agricoles seront amenés à disparaître (extension des zones arides et semi-arides) selon la même organisation.

L'accent mis sur les incidences sécuritaires du changement climatique contribue à lui conférer un statut de « menace de premier plan » pour la stabilité des régions et du monde (Conseil européen, 2008). La situation du Sahel, identifié comme l'une des zones les plus vulnérables au changement climatique – en raison de contraintes socio-économiques et de sa faible capacité d'adaptation – risque de compliquer davantage la situation sécuritaire déjà fragile de la région.

Les actions s'inscrivant dans le cadre des Programmes d'Action Nationale d'Adaptation (PANA) aux changements climatiques[4] entreprises régulièrement dans plusieurs pays du Sahel sont la réponse des autorités locales à cette nouvelle situation. Ces programmes sont des documents stratégiques qui permettent aux États d'évaluer la vulnérabilité de leur pays face aux effets néfastes des changements climatiques et de définir des actions prioritaires à mettre en œuvre sous forme de projets d'adaptation et d'atténuation.

Le PANA recommande aussi une meilleure gestion urbaine et une maîtrise des zones loties et non loties. Ces actions bien menées permettraient de limiter les pertes humaines et les dégâts matériels en cas de crues ou de fortes inondations.

La lutte contre l'impact négatif du réchauffement climatique et de la croissance démographique doit être pensé dans le cadre d'une coopération régionale avec les pays du Maghreb et de la Méditerranée dans le but de défier les crises communes transnationales et de lancer une dynamique de développement. En effet, l'Union européenne a élaboré une stratégie globale face à la crise dans cette région en se fondant sur l'hypothèse selon laquelle sécurité et développement sont intimement liés et que la crise complexe qui frappe le Sahel nécessite une coopération régionale étroite (SEAE, 2016).

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4 Le principal objectif du programme est de mettre en œuvre des mesures urgentes et immédiates d'adaptation, notamment en faveur des populations marginalisées et les plus vulnérables aux effets des changements climatiques.

La pression démographique et le changement climatique comme multiplicateurs de menaces et comme facteurs de stress

La pression démographique et le changement climatique se présentent comme des multiplicateurs de menaces et des facteurs de stress aggravant des réalités difficiles comme l'insécurité humaine dans la région du Sahel.

Cette dernière se reflète au Sahel dans des situations d'extrême vulnérabilité, comme la pauvreté chronique, l'insécurité alimentaire, le changement climatique, les conflits régionaux et la migration. Toutes ces difficultés sont les principaux défis à relever pour assurer la paix, la stabilité et le développement au Sahel.

Crise alimentaire et nutritionnelle aiguë au Sahel

Plus de 20 millions de personnes sont en situation d'insécurité alimentaire et nutritionnelle au Sahel, dont 2,6 millions sont en phase « urgence ». Ces populations sont réparties principalement entre le Mali, le Niger, le nord du Nigeria, le Sénégal et le Tchad.

Cette insécurité alimentaire sévère s'explique à la fois par la forte dépendance à l'égard de l'agriculture pluviale, qui emploie environ 60 % de la population, et par la récurrence des aléas climatiques à laquelle s'ajoutent d'autres variables, telles que la rareté des ressources ou l'appauvrissement des sols, qui restent directement affectées par le changement et les paramètres climatiques.

En effet, des événements extrêmes comme la sécheresse et les inondations peuvent provoquer la perte subite des moyens de subsistance. Cela affecte négativement la capacité d'adaptation de la population sahélienne en croissance, qui connaît une augmentation des activités humaines et exige donc une production agricole à plus gros rendement. Or l'intensification de l'agriculture dans des régions peuplées peut causer une baisse de la production des terres et peut engendrer des famines dans les communautés de producteurs dont la survie dépend surtout de l'agriculture de subsistance.

Le changement climatique est l'une des nombreuses menaces qui pèsent sur la sécurité alimentaire. De ce fait, les politiques et les programmes nécessaires à une sécurité alimentaire durable dans le contexte environnemental présent doivent être complémentaires et non indépendants et doivent accorder une attention particulière aux menaces incertaines découlant du changement climatique.

Il est désormais, plus que nécessaire de renforcer les capacités humaines, infrastructurelles et institutionnelles pour assurer l'adaptation au changement climatique dans tous les secteurs, et plus particulièrement dans le secteur agricole, dans l'ensemble du système alimentaire local et mondial. Il faudra donc mettre en œuvre des infrastructures matérielles et institutionnelles pour le suivi et l'évaluation du changement climatique et la gestion de ses effets à tous les niveaux (mise en place de systèmes de gestion et de diffusion d'informations).

Processus d'urbanisation face au changement climatique au Sahel

L'urbanisation constitue une condition nécessaire à la sécurité alimentaire et au développement durable et représente le principal moteur de transformation du secteur primaire et de l'économie rurale (Cour, 2007). En effet, la confrontation entre offre et demande s'effectue dans un espace structuré par les réseaux de transport et de communication, avec des coûts de transaction et dans des conditions de compétition interne et externe dépendant largement de la localisation. Une accélération du processus d'urbanisation des villes sahéliennes permettrait une réduction de la pression sur les ressources naturelles et, grâce à une croissance du marché régional, les agriculteurs seraient financièrement et techniquement plus capables d'affronter les défis du changement climatique (Le Centre Technique de Coopération Agricole et Rurale [CTA], 1996).

On remarque que les aménagements urbains des grandes villes du Sahel ne suivent pas la croissance que connaît la population sahélienne, ce qui expose celle-ci à des risques importants, comme lorsque se produisent des inondations catastrophiques – lesquelles sont devenues très régulières du fait du changement climatique (Villeret, 2009).

Le Sahel s'est engagé dans une transformation interne des sociétés, passant par une forte urbanisation des bourgs, des villes secondaires et des capitales ainsi que par une transformation des modes de vie. Même si les pays sahéliens présentent de faibles taux d'urbanisation, le niveau d'urbanisation de certains pays sahéliens (comme dans le cas du Mali) est passé de 9 % en 1950 à 42 % en 2018 (Département des affaires économiques et sociales des Nations Unies [DEASNU], 2018).

Rôle des conflits et du changement climatique dans l'augmentation des flux migratoires

En général, toute région confrontée à une surpopulation connaît un mouvement massif de migration. Ainsi, la région du Sahel se retrouve-t-elle devant le défi de la gestion de ce mouvement qui impacte aussi les pays du Maghreb et de la Méditerranée.

Figure 3: flux migratoires de la région du Sahel
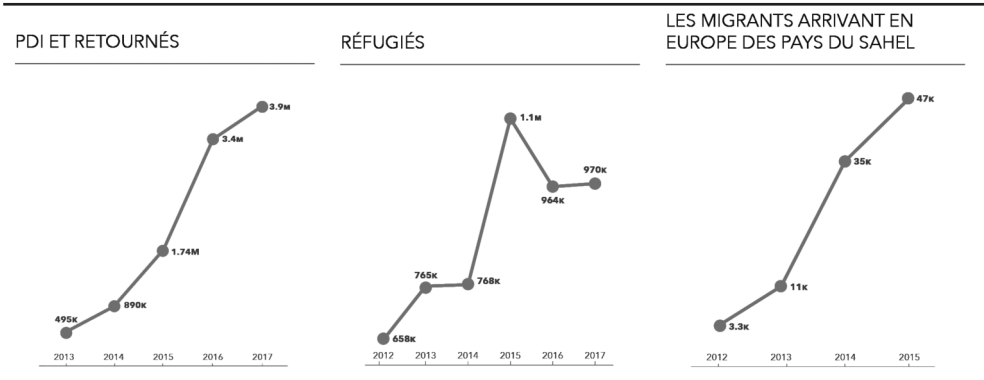
Source : Bureau de la coordination des affaires humanitaires (BCAH), 2017.

D'après la figure ci-dessus, on remarque un fort accroissement du nombre des déplacés internes et des réfugiés à partir de 2012. À la fin de 2015, les migrants arrivant en Europe des pays du Sahel avaient atteint le chiffre de 47 000 personnes. Jusqu'à la fin de 2017, on compte presque 4 millions de déplacés internes et de retournés et 970 000 réfugiés (Haut-Commissariat des Nations Unies pour les réfugiés [HCNUR], 2018).

D'après la convention sur le statut des réfugiés du Haut-Commissariat des Nations Unies pour les réfugiés, un réfugié est une personne « Qui, par suite d'événements survenus avant le premier janvier 1951 et craignant, avec raison, d'être persécutée du fait de sa race, de sa religion, de sa nationalité, de son appartenance à un certain groupe social ou de ses opinions politiques, se trouve hors du pays dont elle a la nationalité et qui ne peut ou, du fait de cette crainte, ne veut se réclamer de la protection de ce pays ; ou qui, si elle n'a pas de nationalité et se trouve hors du pays dans lequel elle avait sa résidence habituelle à la suite de tels événements, ne peut ou, en raison de ladite crainte, ne veut y retourner » (HCNUR, 2010). Les migrants, de leur côté, sont « des personnes qui quittent leurs lieux de résidence habituelle pour une nouvelle destination, à l'étranger ou à l'intérieur de leur propre pays, dans l'espoir d'y trouver la sécurité ou des conditions d'existence plus favorables. La migration résulte d'une combinaison de choix et de contraintes, ainsi que de la décision de s'établir ailleurs pour une période durable » (HCNUR, 2010).

Les raisons de mobilité des personnes déplacées internes (PDI) sont similaires à celles des réfugiés, sauf qu'ils ne traversent pas la frontière internationale pour chercher asile dans un autre pays. Les déplacés internes demeurent légalement sous la protection de leur propre gouvernement et conservent l'ensemble de leurs droits.

Une des conséquences majeures du changement climatique est l'augmentation des flux migratoires environnementaux et climatiques. Ce qui a donné naissance à une nouvelle catégorie de réfugiés : il s'agit des réfugiés environnementaux. Le Programme des Nations Unies pour l'Environment les définit comme des personnes forcées de quitter leurs habitations traditionnelles, d'une façon temporaire ou permanente, à cause d'une dégradation nette de leur environnement qui bouleverse gravement leur cadre et leur qualité de vie.

Tableau 4 : flux migratoire pour la période du 1ᵉʳ janvier au 31 décembre 2017

Pays	Changement Climatique	Conflit et violence
Mauritanie	2 900	4 000
Mali	6 800	35 000
Niger	189 000	40 000
Burkina Faso	8 200	4 900
Tchad	6 000	5 800

Source : Tableau conçu sur la base d'une compilation de données de l'Internal Displacement Monitoring Centre (IDMC, 2017)

D'après les statistiques de l'Internal Displacement Monitoring Centre sur les nouveaux déplacements de l'année 2017, le Niger représente la plus grande part des réfugiés climatiques (189 000 personnes). Dans certains cas (Niger, Burkina Faso, et Tchad), ils sont nettement supérieurs aux réfugiés qui auraient fui la violence et les conflits.

Malgré les graves conséquences découlant des migrations environnementales forcées de grande ampleur dues aux dérèglements climatiques, les politiques de développement et les moyens mis en œuvre pour y faire face restent limités.

Pour anticiper des déplacements massifs de populations sous l'effet des changements climatiques, il faut mettre en place des plans d'adaptation capables de gérer l'ampleur de ces migrations climatiques et environnementales. Il est primordial de sensibiliser la communauté internationale au problème afin de garantir une meilleure compréhension des dimensions de la problématique environnementale et de faire naître la volonté – réelle – d'y faire face.

Impact de l'instabilité sahélienne sur le Maghreb et la Méditerranée

Les effets des menaces qui planent sur la région du Sahel, comme la violence et la migration de la population, se propagent en particulier dans tout le nord du Maghreb et en Europe, lesquels s'efforcent de juguler ces défis sécuritaires.

Les pays affectés par les vagues de migration provenant du Sahel, comme les pays du Maghreb et de la Méditerranée, devront faire face à d'énormes défis et leurs institutions devront être en mesure de gérer des migrations soudaines et inattendues. Cela implique une nécessaire coopération entre les pôles européens, maghrébins et sahéliens.

En termes de lutte contre le trafic illicite des migrants, l'Union européenne et l'Afrique travaillent en coopération afin d'apporter les réponses les mieux adaptées à un défi qui touche autant les personnes qui ont recours à la migration pour fuir la crise environnementale et la violence que les États qui doivent y faire face (Conseil européen, 2011). À cet égard, plusieurs institutions régionales, comme l'Union africaine, l'Union du Maghreb arabe, la Communauté Économique des États de l'Afrique de l'Ouest, l'Union pour la Méditerranée, le Dialogue «5+5», et le Dialogue méditerranéen de l'OTAN visent à renforcer la politique de voisinage pour lutter contre les menaces partagées.

C'est dans ce contexte que 5 États – la Mauritanie, le Mali, le Burkina Faso, le Niger et le Tchad – ont créé le groupe G5 Sahel. Il s'agit d'une initiative qui s'intègre dans la stratégie de sécurité et de développement durable du Sahel visant à lutter contre le terrorisme et le crime organisé, à consolider la gouvernance, à bâtir des infrastructures et à renforcer la résilience des populations et le développement humain (G5 Sahel, 2016).

Conclusion

Dans son débat de juillet 2018 sur le lien entre le changement climatique et le risque d'aggravation des conflits, le Conseil de Sécurité de l'ONU a dressé le constat qu'« un monde plus chaud est un monde potentiellement plus conflictuel ». En effet, la menace que fait peser le changement climatique sur la paix et la sécurité internationale oblige tous les pays à adopter des mesures concrètes pour son atténuation, principalement dans un contexte d'augmentation des températures allant jusqu'à 4 degrés à l'horizon de 2100. Le terme « Ground Zéro », qui décrit une scène de grande dévastation, est désormais attribué au Sahel à cause de la forte variabilité climatique, des niveaux importants de pauvreté, des conflits régionaux et de la croissance rapide de sa population (ONU, 2008). Ces pressions pèsent lourd sur la performance globale du système politique et de la gouvernance des États du Sahel.

L'incapacité de certains gouvernements à faire face aux conséquences des changements climatiques affectant leur population pourrait engendrer des conflits violents, des

tensions sociales et une pression sur leurs économies déjà vulnérables. Le Sahel est aux prises avec plusieurs problèmes de gouvernance qui risquent de freiner la mise en application des mesures de réduction de la vulnérabilité de sa population aux impacts des changements climatiques (corruption, mauvaise gestion des finances publiques et du capital humain). Ainsi, les États du Sahel risquent-ils d'être encore plus fragilisés sous les pressions que les changements climatiques sont susceptibles de faire peser sur leurs systèmes de gestion.

Le risque d'instabilité dépasse le Sahel pour menacer aussi les pays du Maghreb et de la Méditerranée sur le long terme, compte tenu de leur géographie et de leur histoire communes, caractérisées par de fortes interdépendances et par des destins intimement liés. En effet, le Sahel représente la profondeur méridionale naturelle du Maghreb et une nouvelle ligne de frontière entre la Méditerranée et l'Afrique subsaharienne pour l'Europe. Une concertation permanente s'impose alors entre les pays du Maghreb et de la Méditerranée sur le présent et l'avenir de la scène sahélienne en termes de réponses adaptées aux défis qui touchent autant les personnes qui décident de recourir à la migration pour fuir la misère et la violence que les États qui doivent y faire face.

Les enjeux liés au changement climatique constituent sans conteste des objets fondamentaux de la géopolitique sur l'axe Europe – Méditerranée – Afrique. Les politiques démographiques et de luttes contre le réchauffement climatique intègrent à la fois des dimensions nationales et régionales. Chaque pays dispose de caractéristiques propres en fonction de sa dotation en ressources hydriques et de sa croissance démographique. La dimension régionale concerne quant à elle, l'organisation des acteurs chargés de limiter les impacts négatifs de ces deux variables. Un plan d'investissement climatique pour la région du Sahel (PIC-RS), d'un montant de 400 milliards de dollars et concernant la période 2019-2030, a été adopté le 25 février 2019 au Niger par les 17 pays du Sahel. Ce plan est la traduction de l'engagement pris par des États africains lors de l'accord de Paris sur le réchauffement climatique. À travers son programme prioritaire, il vise la mise en œuvre de diverses actions ayant pour objectif de limiter les émissions de gaz à effet de serre et de permettre aux populations de s'adapter aux changements climatiques.

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Grey Areas in the Sahel: The Security Consequences of Climate Change

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Introduction

Over the past two decades, international and regional attention has grown towards the Sahel as a major focus of security threats and humanitarian crises. The region has become the weakest point to face climate change on the African continent. Rising temperatures and recurrent waves of drought have had serious consequences for people's livelihoods. The inability of local governments to cope with climate change and provide support for the local population has led to the emergence of "grey areas", exploited by organised and criminal groups, who have found substantial opportunities to strengthen their presence.

The security implications of climate change impacts extend beyond the Sahel to parts of Africa, to Europe and to the Middle East. Ensuring that climate change does not trigger or exacerbate conflict or weaken states across the Sahel is a major challenge for national governments and international actors alike.

Over the past 10 years, understanding and awareness of the links between climate change and security have grown substantially. Today, the United Nations (UN), the European Union (EU) and the G-7 are defining climate change as a threat to global and national security though acknowledging that the links between climate change, conflict and vulnerability are neither simple nor linear. However there is a clear consensus that the increasing effects of climate change quite naturally lead to more fragility and conflict.

Some studies suggest that rising temperatures increase the risk of civil war in Africa. Former UN Secretary-General Ban Ki-moon has described the conflict in Darfur as the world's first climate change conflict. The assumption is that water scarcity due to altered rainfall patterns resulting from climate change contributed to the conflict. This reflects findings that the incidence of conflict is likely to be higher in years of lower precipitation. Using regression analysis of historical data, Burke et al. (2009) found a relationship between past internal conflicts in sub-Saharan Africa and variations in temperature (but not precipitation) showing "substantial increases in conflict during warmer years." In numerical terms, a 1% increase in temperature leads to a 4.5% increase in civil war in the same year and a 0.9% increase in the following year. By year 2030, based on averaged data from 18 climate models, this amounts to a 54% increase in armed conflict incidence in the region.

Not everyone accepts the causal link between climate change and conflict with much of the doubt resulting from inherent complexities of defining the latter. With many political,

social, economic and environmental factors playing either a preventive or stimulating role, applying quantitative analysis to conflict and predicting the chance of future conflicts is problematic. It is clear, however, that impoverishment and human insecurity may arise as a result of climate change if preventive measures are not adopted. This occurs in a context where there is a lack of evidence concerning global warming's direct influence in increasing conflict (Bishop, 2017).

It is also clear that climate change increasingly threatens the stability of states and societies. In the context of global security, it is best understood as a "threat multiplier" that interacts with and compounds existing risks and pressures in a particular context and can raise the likelihood of vulnerability or violent conflict. Weak countries are particularly affected but stable countries can also suffer because of the combined pressures of climate change, population growth, urbanisation, environmental degradation, and social and economic inequality.

The Sahel region offers a special "model" that combines its territory with rapid climate change in recent years, a significant growth of insecurity, and the spread of terrorist and organised crime groups. This raises the question of the role of climate change in strengthening the capacities of criminal groups and of why the Sahel is becoming available for exploitation. The role of climate change and the factors that result from the emergence of "grey areas" in the Sahel must be examined to identify their effects on stability, development and adaptation to climate change in these areas. According to Lukas Rüttinger "as the climate is changing, so are the conditions within which non-state armed groups such as Boko Haram and IS operate" ("Climate Change and Terrorist Groups - Explaining the Links", n.d.) Though he underscores that climate change "does not create terrorists, rebels or criminals," he notes that it does contribute to creating the kind of fragile environments in which such groups can thrive by driving food insecurity and forcing local populations to compete for dwindling natural resources such as land and water. These groups can also offer alternative livelihoods, economic incentives and, in some cases, they can respond to real social, political and economic grievances.

This chapter will review a number of cases (Mali, Niger, Chad, Burkina Faso, Nigeria and Mauritania) in which terrorist groups and organised crime have used the consequences of climate change to further their activities, while clarifying factors that have contributed to the impact of climate change on security phenomena. The Sahel has witnessed manifestations of the intersection of areas of climate change with areas of terrorist and organised crime groups. This intersection can be illuminated by identifying areas most affected by climate change in case studies as well as the nature of terrorist threats and organised crime in these countries and their relevance to climate change zones.

Climate Change Trends in Case Studies

The countries studied are the poorest in the world with the lowest UN Human Development Index (HDI). Poverty is more prevalent among most of the rural population in these states, where most people depend on cropping and pastoral activities.

Mali ranks 182th out of 189 in the 2018 UN HDI.[1] 83% of the population relies on traditional agriculture, which contributes 50% of gross domestic product (GDP). 43% of the population live below the income poverty line. Such indicators show the depletion of the natural safety net of livelihoods, which results in severe vulnerability of local communities (United Nations Development Programme, 2015). The climate of Mali shows annual fluctuations, especially with regard to rainfall. Mali is characterised by a dry climate with 65% of its land surface experiencing semi-desert and desert conditions. Data on the Sahel desert and plant climate shows declining conditions over the past 40 years. As rainfall decreased, temperatures increased and drought conditions have become more frequent, causing migration, both temporary and permanent. With almost half of the population being under the age of 15, the population is expected to double within 20 years, a major challenge for food security because agricultural productivity is not following demographic trends. With the security situation deteriorating, tourism, which provides alternative livelihoods for farmers exposed to climate risks, is on the verge of collapse (Badal, 2011).

Niger is one of the world's countries most affected by climate change due to water scarcity. Rainy seasons are much shorter and more difficult to predict. The country is desert, with only 12% of the soil arable, but more than 80% of the population is engaged in agriculture. Agriculture accounts for nearly 40% of GDP. From 2000 to 2012, the country experienced four years of drought (2000, 2004, 2009 and 2011), affecting millions of people. Severe droughts lead to harvest failure and the population thus faces the highest rates of malnutrition and food insecurity in the world (Kouré, 2016). Niger has a hot, semi-arid (south) and arid (central and north) climate characterised by very high temperatures year-round. Climate models expect increased temperatures and rainfall fluctuations, and the projected increase in the amount and intensity of heavy rainfall will also increase flood risks. Niger saw devastating floods in 2009, 2012, 2013 and 2014, resulting in crop loss and damage to cultivated land. At the same time, locust outbreaks often follow flooding (US Agency for International Development, 2017).

In Niger, dry periods see people removing woodland forests for cooking or sale. Each year, Niger loses 100,000 hectares of arable land to desertification and loses between

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1 The countries of the Sahel score low in the 2018 Human Development Report of the United Nations Development Program (UNDP). Of the 189 countries, Nigeria (157), Mauritania (159), Senegal (164), Sudan (167), Ethiopia (173), Burkina Faso (183), Chad (186), South Sudan (187) and Niger (189) (UNDP, 2018, pp. 24-25).

60,000 and 80,000 hectares of forest each year. The population is 19.8 million with high population growth (3.9% per year) and 55% of the population live below the poverty line. Continuing drought periods have also increased the need of the Niger population to diversify their livelihoods. The convergence of agriculture-grazing created conditions for competition and conflict over limited natural resources.

About 87% of Chadians are classified as poor, and the percentage of those suffering from "extreme poverty" (63%) is exacerbated. Climate change represents a particular threat to Chad. The country's size is 1,284 million km². About 90% of its 14.5 million people live in the southern half of the country. Most Chadians depend on subsistence farming and livestock for their livelihoods. The semi-arid pastures in the Sahel in the north of the country provide rangelands for livestock during the rainy season while the fertile agricultural fields in the south produce mostly cash and food crops. Of the 186 countries surveyed in a 2017 survey on climate vulnerability, Chad was ranked as most at risk. Since the mid-20th century, temperatures in Chad have been increasing while rainfall is decreasing. 90% of the country's largest lake, Lake Chad, has disappeared over the past 50 years due to a combination of droughts and increased withdrawals for irrigation. Rural areas are most at risk of suffering from the effects of climate change and contain the majority of the population and most of the poverty. According to the World Bank, sanitation services such as sewage, rainwater drainage and waste collection are weak. In the event of flooding, as happened in 2010, 2011 and 2012, the infrastructure has not been able to cope.

Northern Burkina Faso is a semi-arid region that is chronically food insecure. It has a high population growth rate (3% per year during 2010-2015), pervasive poverty (43.7% live on less than $1.90 per day), a highly rural population (70%) and a heavy reliance on agriculture, which employs more than 80% of the working population and accounts for about 34% of GDP. These factors are driving expanded cultivation and extensive, low-input agricultural production, both of which increase pressure on natural resources essential to the country's mostly rural population. Northern Burkina Faso is dominated by a semi-arid climate. Rainfall totals, however, show high inter-annual and decadal, as well as spatial variability. The region experienced the worst drought of the 20th century in the 1970s and 1980s, marked by a 40% decrease in long-term average rainfall in the early 1980s. Although some recovery occurred in recent decades, cumulative rainfall in this part of the Sahel has not returned to pre-1960s levels.

Although Nigeria depends heavily on the oil industry for its budgetary revenues, it is predominantly still an agricultural society, suffering in recent years from an economic

downturn. In 2015, Nigeria's GDP reached US $481 billion. 21% of its GDP comes from agriculture. In the second quarter of 2018, agriculture contributed 22.86% to overall GDP in real terms. About 46% of the population lives below the poverty line, 55% of the population has access to electricity and 69% have access to clean water. Although its infrastructure has improved over the past two decades, climate change poses a threat to water supplies. The Intergovernmental Panel on Climate Change (IPCC) labelled Nigeria a "hot spot" likely to see major shifts in weather in the 21st century. It has experienced a myriad of these effects already. Its coastal areas have seen more rain than usual, which is a common effect of climate change. The situation is worsened by the sea level rise, which is estimated to displace 14 million people in those same coastal areas. There is a significant reduction in arable land due to an average temperature increase and undesirable rainfall patterns over the most recent decades. The Sahara Desert is also observed to be encroaching from the north imposing the rapid shrinkage of Lake Chad (Lytle, 2017). Nigeria has suffered more frequent natural disasters due to climate change. From 1960 to 2016, there were 28 river floods affecting more than 10 million people.

Mauritania is particularly vulnerable to climate change. 75% of the country is part of the largely uninhabited desert and 25% is located in the semi-arid Sahel. It receives little rain at any time of the year. The southern part of the country reaches the semi-arid region called the Sahel. Mauritania experiences a rainy season between July and September. Average temperatures are higher in the southern part of the country and lower in the north for most of the year. Since the mid-1960s, long-term drought has killed most cattle, forcibly relocated populations, and re-established new villages or expanded small towns in Mauritania. Many others moved to the capital Nouakchott. Mauritania's average annual temperature has risen by 0.90 degrees Celsius since 1960 with an average of 0.19 degrees Celsius per decade. Mauritania's average annual rainfall has not changed with any steady trend since 1960. There has been some unusually heavy rainfall in recent years (Yacoub & Tayfour, 2018).

Areas of Terrorist Groups

Although the Sahel region was not the scene of terrorist group growth before 2000, some small radical movements in Nigeria emerged and were targeted and eliminated, including the movement of Mohammed Marwa (Maitatsine), which emerged in the late 1970s.

The main shift that marked a milestone in the emergence of terrorist groups in the Sahel was the creation of the Salafist Group for Preaching and Combat (GSPC) in Algeria and its expansion into the Sahara and Sahel. The group carried out a series of terrorist attacks

in a number of countries in the region. This was followed by the group joining al-Qaeda and renamed as al-Qaeda in the Islamic Maghreb (AQIM) in January 2007.

The emergence of the Boko Haram group in 2002 and the spread of its movement in 2009 also marked a new shift in the development of terrorist groups in the Sahel. The Mali crisis that followed the March 2012 coup marked a third stage in the growth of terrorist groups and their spread into neighbouring countries following international intervention in January 2013 (Ahmed, 2017).

The Sahel region has become a centre for the growth of terrorist groups in the last decade. A number of countries in the Sahel have advanced in the Global Index of Terrorism issued by the Institute for Economy and Peace (IEP). In the 2017 Index, Nigeria and Niger were ranked among the states most affected by terrorism at rates higher than 6 out of 10, followed by Mali, Chad, and Burkina Faso with 4-6 out of 10, while Mauritania was categorised as being unaffected (Table 1).

Table 1. The ranks of the Sahel countries (under study) in the Global Index of Terrorism 2017

Country	Ranking in the index
Nigeria	3
Niger	20
Mali	25
Chad	34
Burkina Faso	43
Mauritania	130

Source: The Institute for Economics and Peace, 2017.

Growing Terrorist Networks in Mali

The north of Mali, a historic centre of violence in the country where the Tuareg call for secession from the state, saw an unprecedented growth of terrorist groups following the Tuareg rebellion against the state in early 2012. A subsequent military coup in March 2012 brought together Tuareg and terrorist groups. The advance of terrorist groups and their control of a number of historic cities in northern Mali resulted in international intervention to restore stability in Mali led by France in 2013.

The crisis in Mali and the unprecedented activity of terrorist groups in the north of the country led to movements of these groups into neighbouring countries, which contributed to the threat of instability in the entire Sahel region. In 2015-2016, there was a shift in sectarian

violence and state opposition in Mali to the central region, where climate change may have played a role. Terrorist groups in Mali have adopted two mechanisms:

(1) Increased motivation among individuals to join terrorist groups.

Extreme poverty, economic fragility, climate change and environmental degradation provide fertile ground for criminal and terrorist groups to thrive.

(2) Exploitation of historical grievances by terrorist groups.

Herders, farmers and fishermen have cohabited in the middle region of Mali, known as the Macina, for centuries. Conflicts were generally managed by local chiefs in charge of land and water. Yet these traditional institutions have lost much of their legitimacy and efficiency over the years as climate change and weather unpredictability have reduced the amount of water and grazing lands available to farmers and herders and, therefore, the options available to the chiefs when attempting mediation (Walch, 2017).

The decline in these customary institutions has also been partially due to the state using them to favour some groups over others. For example, the informal group of chiefs that collects the tax to access grazing lands has used its power to impose overly high taxes on the Fulani or Peul, a herder ethnic group that has been abused and discriminated against by governments.

However, the appearance of terrorist groups over the last two years in the Macina has made things much worse. Since 2015, terrorist groups have progressively increased their presence in central Mali, where they have executed civilians and government officials and committed other abuses. Communal violence has also increased. More than 80% of public schools have been closed due to the existence of terrorist groups.

Terrorist groups have been effective at exploiting existing grievances between different ethnic groups, recruiting local residents, inflaming tensions, and supplying weapons. They have been particularly supportive of the Fulani or Peul herders compared to the Bambara and the Dogon farmers.

In the Macina today, herders often do not want to follow the rules established by the traditional chiefs. Terrorist groups have been more responsive to the grievances of the herders than the government, and have encouraged these groups not to pay any taxes to get access to grazing lands. For many Fulani, the justice provided by terrorist

groups is seen as more legitimate and effective than other forms of traditional or formal justice.

There are many factors mediating the relationship between climate change, terrorist recruitment, and violence, ranging from local institutions and a history of conflict to existing patterns of marginalisation. However, it is clear that climate change is a reality that is putting pressure on communities that are already struggling.

Terrorist groups have been instrumental in manipulating the grievances of some of the most climate change-affected communities. While some recruits are attracted by Islamic ideology, many more have joined terrorists because of unresolved conflict over access to grazing land and water, lack of justice and protection, and corruption.

This context has evidently played a part in the creation of Katiba Macina. The group's leader is Amadou Kouffa. The purpose of Katiba Macina was originally the restoration of a Fulani caliphate. Now, with its alliance with the Tuareg terrorist group Ansar al-Din, and indirectly with more transnational organisations, Central Mali is currently undergoing a classic scenario of people-centric insurgency.

As a response to this surge of violence, and lack thereof by the government, ethnic-based militias have been created for self-protection and retaliation, particularly the Bambara militia called the Dozos (Ultima Ratio, 2018).

These developments have moved to the countries neighbouring Mali, where the first terrorist group in Burkina Faso was established by Fulani fighters which links with the Katiba Macina and Ansar ul-Islam.

Spread of Boko Haram

Nigeria has been plagued by waves of terrorism in its history, but the latest wave by the Boko Haram group has been the worst in the history of the country because of its rapid growth and the inability of the government to weaken or eliminate it. Worse still are the effects of this wave on stability and the power of the state.

The Boko Haram group was founded in northern Nigeria in 2002 by Mohammed Yusuf with the primary focus being to oppose Western education. This focus shifted in 2009 when clashes broke out between the group and the security forces, culminating in the execution of Yusuf. The problem has been exacerbated by a lack of public confidence in state and government institutions.

Although Boko Haram did not have beginnings rooted in the scarcity of natural resources, this element has helped the group in achieving its goals, in particular near Lake Chad, a region where drought-induced instability, migration, and increased unemployment are the ideal breeding ground for Boko Haram's cadres (Lytle, 2017). Indeed, Lake Chad has shrunk by 90% since the 1960s and it has become increasingly difficult for families to make a living through agriculture, fishing and livestock farming. According to the UN, 10.7 million people in the Lake Chad basin need humanitarian relief to survive. The region has thus become a perfect recruiting ground for the terrorist militants (Ross, 2018).

Thus, in Nigeria, climatic trends and agriculture have affected the patterns of terrorism in the country, specifically with the Boko Haram group, recruiting young people from families living in extreme poverty. Risk analyst firm Maplecroft (October 2014) identified Nigeria as one of the countries most threatened by climate change-related violence. According to Darby (2015), "widespread drought and food insecurity helped create the socio-economic conditions that led to the emergence of Boko Haram and the violent insurgency in the North East of the country."

The number of Boko Haram incidents rose from 317 in 2013 to 1,549 for the period April 2017 to April 2018, according to the Control Risks report. Nigeria suffered most of these incidents (220 cases), followed by Mali (194) and Cameroon (96) (Parker, 2018).

Although important resources have been diverted to military efforts to prevent further attacks by Boko Haram, the operations are severely challenged by two factors: the massive size of the territory in which the group operates and the proliferation of persistent corruption that undermines efforts to defeat the group. In addition, the support of the local community for Boko Haram further hinders the security crackdown.

Transfer of Operations to the Territory of Neighbouring Countries

In the context of the Mali crisis and the rise of the Boko Haram group, the Sahel region has been experiencing unprecedented growth of various types of terrorist organisations. And, to the extent that these militants have been defeated elsewhere, they have become increasingly active in this region.

Niger has been subjected to terrorist activities on multiple fronts. Despite the absence of a militant group in Niger, it is surrounded by countries where terrorist groups are active alongside separatist insurgency and civil wars. While groups such as AQIM and Movement for Oneness and Jihad in West Africa (MOJWA) create insecurity on the border with Mali and Burkina Faso, the Boko Haram group poses the most significant internal threat. Over

the past two years, they have carried out repeated attacks, particularly on the border with Nigeria (United Nations Office on Drugs and Crime, 2018). Since 2012, the Niger government has taken a more progressive stance against terrorism, particularly at regional and international levels. This process culminated in its military engagement against Boko Haram through the participation in the Multinational Joint Task Force (MNJTF). The government of Niger underwent major reforms to increase the criminal justice response to terrorism at that time (Melotti, 2017).

Chad suffered the first attacks from Boko Haram in February 2015, which is moving across from the country's western border with Nigeria, where that year saw four attacks on civilians and military in the Chadian capital N'Djamena. However, the attacks by the terrorist group declined in 2016, apparently due to the launching of the MNJTF operation, formed upon the African Union's (AU) decision to fight Boko Haram, which included the forces of Chad and Benin. The Boko Haram crisis has also leaked into the Lac region of Chad, which now has more than 60,000 displaced people. This is a matter of concern because unemployed young people in the country may be at risk of recruitment and extremism by the Boko Haram group (Abdi, 2017).

Burkina Faso, which has been relatively safe in the past, has been a major target for terrorist groups since 2015. These attacks were mainly confined to the north of the country, often committed by terrorists crossing the border from neighbouring Mali. However, in January 2016, a major attack took place in the capital Ouagadougou, with 30 people killed in an attack on Cappuccino, a cafe popular among expatriates. The AQIM terrorist group claimed responsibility. During 2017, Burkina Faso witnessed a slow but steady increase in terrorist activity, including several attacks in the far north region of the Mali border, which saw nearly 50 terrorist-related operations. The Sahara branch of al-Qaeda in the Islamic Maghreb joined Al-Mourabitoun, Ansar al-Din, and the Macina Liberation Front to form the Group to Support Islam and Muslims (Jama'a Nusrat al-Islam wa al-Muslimin, JNIM). Ansar ul-Islam is also active in the Sahara Desert in Burkina Faso. In March 2017, a pair of coordinated terrorist attacks struck the French Embassy in Ouagadougou and the General Staff of the Armed Forces of Burkina Faso, killing eight soldiers and wounding 60. JNIM claimed to have carried out the attacks, all under the leadership of Iyad Ag Ghaly, the Tuareg separatist who by then had become the most wanted terrorist in the Sahel (United States Department of State, 2018).

Areas of Organised Crime

The Sahel region is far from a pivotal area for transnational organised crime. The importance of organised criminal activity there stems from the fact that there are few

alternative activities that produce similar profits and rapid enrichment. This particularly applies to four undertakings that have expanded significantly since 2003: weapon smuggling, human smuggling, kidnapping for ransom, and cocaine smuggling. The spread of poverty in the Sahel also contributed to the combination of criminal gangs and extremist groups. Marginalised regions that suffer from high rates of poverty within these networks are easy prey through the exploitation of their people's anger at the economic and social conditions.

While the bulk of commercial flows across the Sahara are in licit goods, which often rely on informal arrangements with security and customs services, the boundaries between licit and illicit trade are blurred. Long-standing commercial and social networks are frequently based on ethnic and tribal communities. The goods involved bypass the official customs system in a process that has led to the establishment of informal arrangements between traders and officials.

The embargo imposed on Libya stimulated contraband and conflicts in Algeria, northern Niger, and Mali, which turned the region into a major arms trafficking hub. The regional trade in weapons has increased as a result of the conflict in Libya and growing demand from northern Mali since early 2012. Boko Haram is itself heavily involved in arms trafficking across the Nigerian border. Besides weapon smuggling, human trafficking and kidnapping for ransom and slavery are major sources of its income (Nett & Rüttinger, 2016).

Cigarette smuggling in particular has greatly contributed to the emergence of the practices and networks that have allowed drug trafficking to grow. The migrant business also helped spawn the emergence of carriers in the region specialising in off-road transport or in establishing arrangements with corrupt officials. Irregular migration flows from sub-Saharan Africa to North Africa and on to Europe grew beginning in the early 1990s and nearly 60 million people could migrate to North Africa and Europe by 2035 due to desertification in sub-Saharan Africa. Gao in northern Mali and Agadez in neighbouring Niger, which are hubs for cigarette smuggling, emerged as major hubs for migrants' journeys to Morocco (via Algeria) or Libya.

The increase in kidnappings for ransom has been closely linked to the growing presence of AQIM in the Sahel region. Political motives for spreading terror played a limited role in AQIM hostage-taking (Lacher, 2012). In addition, the cocaine trade from South America to Europe via West Africa has expanded rapidly in recent years (Lacher, 2012). The Mali border, especially in the northern region, has been recognised as being one of the main transit points for cocaine exports from Latin America to Europe and the Middle East. The

profits of this trade provide not only significant financial gains but also advantages in terms of employment and social mobility, especially in vulnerable groups such as youth and the hierarchy of their clans (International Alert, 2016).

Organised crime has exacerbated tensions and increased violence in Mali before, during and after the 2012 events. Smuggling of legitimate goods has declined due to increased insecurity (causing severe humanitarian crises among the northern population). In northern Mali, armed factions, terrorist groups and the military have been fighting to control trafficking routes.

The tribal peace agreement struck in Anefis in the northeast of Mali in September 2015 built a commitment to compensate for some drug raids carried out by armed groups against each other during the war. It also requires respect for the free movement of all types of goods across northern Mali, raising some doubts about the real purpose of this agreement. Despite the end of official hostilities, small arms are increasingly available in the border areas of Mali at very low prices.

The challenges posed by organised crime in Mali are substantial and the proceeds of criminal activities support and fund non-state armed groups and the security forces in Mali, including the border enforcement agency.

Threats of Grey Areas

By examining the intersection between climate change, terrorism and organised crime in a number of Sahel countries (Mali, Niger, Nigeria, Chad, Burkina Faso and Mauritania), a set of results can be confirmed as follows:

Location of "Grey Areas" in the Sahel
Case studies indicate that areas most affected by climate change and most commonly used by terrorist groups and organised crime can be divided into northern areas close to the Sahara or integrated into the climate sector of arid deserts, which are most affected by climate change.

It is possible to distinguish between countries where terrorist groups and organised crime are growing in the same regions that are more vulnerable to climate change, such as northern Mali and northern Nigeria, and other countries that are under terrorist threat by virtue of neighbouring countries such as Niger, Burkina Faso and Chad.

Within Nigeria, the northeast around Lake Chad is the region most vulnerable to climate change. Boko Haram emerged in the same area and against the background of a "history of dissidence through radical ideology, and sometimes violence, and in movements with virulently anti-state agendas" (Nett & Rüttinger, 2016, p.14). This facilitated the group's growth in a region characterised by a long-held sense of political and economic marginalisation. It is equally driven by ideology and the wish to combat perceived injustices and oppression. However, in contrast to other groups, Boko Haram's relationship to society is less concerned with winning the support of the local population but rather relies on ruthless violence to maintain control over the population (Nett & Rüttinger, 2016).

Areas around Lake Chad, whose water mass has shrunk by over 90% in the last 50 years, have seen its decline in size impede the livelihoods of more than 21 million people dependent on the lake to meet their basic needs such as fishing and cropping. These areas, such as the region of Deva in the southeast of Niger, are Boko Haram's particular theatre of operations.

Finally, certain border areas between the Sahel countries, such as Liptako Gourma, suffer from a great number of criminal activities.

Figure 1. Areas of operation by criminal and terrorist groups.
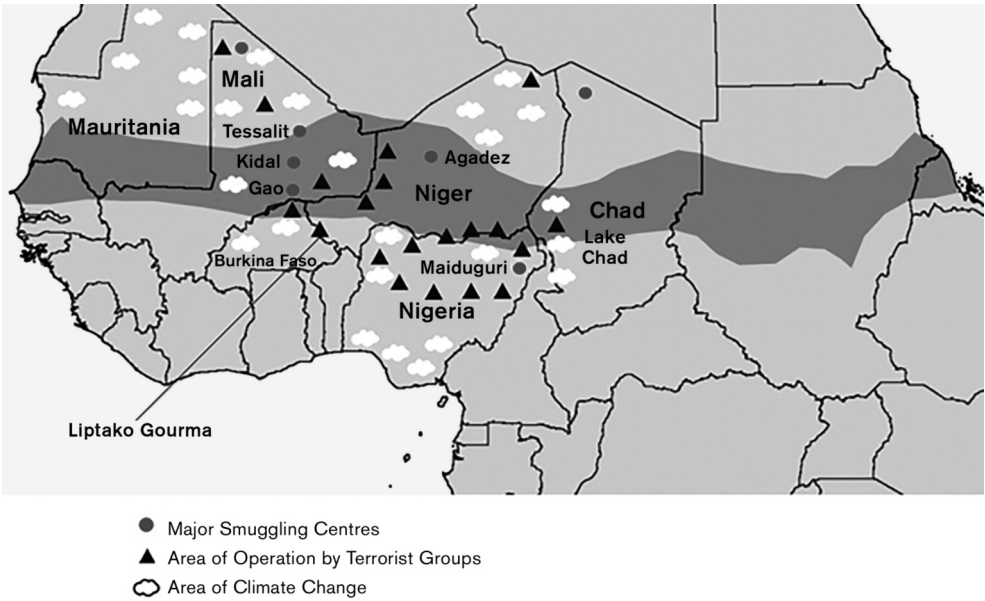
Source: Compiled by the author based on chapter information.

Mechanisms of Criminal Groups Exploitation of Climate Change in the Sahel
While there is no direct role of climate change in influencing security phenomena such as terrorism and organised crime, the Sahel countries are affected by many factors that increase the impact of climate change on these phenomena by strengthening their capabilities and objectives in the region.

The most important of these factors are:

- Poor governments in the Sahel
- Fragility of borders
- High population growth
- Increases in the proportion of youth in the population
- Reliance on agriculture as the main sector of the population's livelihood
- Increased competition for the same dwindling resource base
- The spread of corruption.

Under these factors, criminal groups rely on a variety of mechanisms to exploit climate change to achieve their activities in the Sahel.

Climate change can further complicate the security threat posed by networks of terrorist groups and organised crime operating in the Sahel. The region's population is predominantly young and the rural population is growing. Livelihoods are largely dependent upon climate-based natural resources, including land, water and pastures. Rising temperatures, extreme weather events and variable rainfall undermine these livelihoods, and governments are proving unable to help their populations adapt to climate change and develop alternative livelihoods, further eroding the social contract and undermining the legitimacy of the Sahel states. Thus, governments risk creating a vacuum that can easily be exploited by terrorist groups and organised crime. These destabilising forces, in turn, reduce the ability of governments and societies to respond to the threat of climate change, creating a vicious circle of vulnerability. Sometimes, criminal groups try to bridge the gap left by the state by providing basic services to gain legitimacy and secure trust and support among the local population. Criminal groups are highly adaptable and can develop strategies to respond to change.

Terrorist groups benefit from the sense of helplessness of marginalised groups in facing climate change by turning them towards anger and action against the Sahel governments. In addition, organised crime networks have benefited from the weak capacity of governments to prevent the Sahel from becoming a major transit point for

drug, arms and human trafficking. These activities are currently available, albeit illegal and dangerous, to generate income and livelihood opportunities for marginalised segments of the population whose traditional livelihoods of agriculture and grazing are undermined by high temperatures and shifting rainfall patterns.

Criminal groups exploit the consequences of climate change in expanding their strength through a variety of means such as increased recruitment, increased criminal and terrorist operations, increased armaments and higher smuggling capacity. Climate change is increasingly contributing to vulnerability by adding to conflicts surrounding natural resources and insecurity in livelihoods. Criminal groups proliferate and can operate more easily in these fragile and conflict-affected environments where the state has little power and lacks legitimacy.

In weak and resource-poor environments, criminal groups can use natural resources, such as water as a weapon of war, or deny access to other natural resources. That dynamic may be exacerbated by climate change that increases the scarcity of natural resources in the Sahel.

Criminal and terrorist groups also proliferate in and exploit areas where people have been displaced as a result of climate change. The Boko Haram group is concentrated and operates in areas where people have been displaced around Lake Chad. According to Sorg (2018), there are two possible mechanisms through which drought can be a cause of increased terrorism. On an individual level it increases the incentive to join an armed group while at the group level some forms of political violence become impossible. From the beginning, individuals need to generate income, which in turn depends on their agricultural production. Therefore, whether the individual is affected by the drought increases the likelihood of individual decision-makers joining the armed group. Armed groups can maximise their goals of political change by relying on terrorism in the face of severe resource constraints.

Together, this leads to a situation in which individuals are more willing to join armed groups. These groups are typically forced to rely on terrorism because of limited resources. According to the conceptual framework, political violence can adapt to resource constraints through more cost-effective operations. In short, more terrorism will be observed in the course of droughts. For drought to lead to conflict, the population that directly or indirectly depends on agricultural production must be dehydrated. Furthermore, individuals affected by drought should have low means of adaptation and lack an effective social safety net that can be trusted. Both apply to Mali (Sorg, 2018).

Proposals to Deal with the Security Consequences of Climate Change in the Sahel

Climate change has been a contributing factor to the increase in terrorism and organised crime. This does not mean that it has been the only factor or key factor in the vibrancy of criminal and terrorist action in the Sahel. But the adverse effects of climate change on natural phenomena such as drought and floods create opportunities for the growth and influence of terrorist and criminal groups in areas affected by these developments. This occurs in the context of a range of intermediate factors such as poor governance, corruption and population growth.

Climate change may therefore be seen as a "threat multiplier" that exacerbates existing problems and weaknesses. The governments and local communities in the region will have to manage these shifts to mediate competition for resources and reduce tensions over climate-induced migrants. In order to meet the challenges of criminal and terrorist groups and prevent their exploitation of climate change, the following set of policies could be developed:

1. International donors and governments of Sahel countries should support the building of more flexible and adaptable states and societies. The key would be to more effectively connect adaptation to climate change, development and humanitarian assistance, peace-building and conflict prevention.

   Interventions to improve the situation in rural areas of the Sahel should give priority to employment and income-generating opportunities and should include clear rules for the use of and access to land and water, land and equitable tenure systems, as well as investment in land rehabilitation and sustainable land management. The land-based approach builds the capacity of rural communities to adapt to climate change, enhance food and water security, and help stabilise most of the region.

2. It is possible to increase the interest and support of African countries for participating in confronting the criminal and terrorist groups. Such groups have serious implications for the security of the African continent and its surroundings. These matters are being pursued through the AU by development of the African Peace and Security Architecture (APSA) protocols which establish initiatives to strengthen armies, police and criminal justice institutions in the Sahel countries. On the other hand, as African countries cooperate in the military and security fields

to eliminate criminal groups and control borders, they can also activate their cooperation to cope with climate change by providing initiatives for economic integration and exchange of experiences among African countries to develop solar and wind energy infrastructure to finance climate change abatement.

3. Despite the EU's strong support for the Sahel, the EU could expand the number of countries benefiting from this aid instead of focusing mainly on the G-5. This approach would be consistent with the policies of African regional organisations such as the AU, which deals with 11 countries in the Sahel-Saharan region, stretching from Somalia in the east to Mauritania in the west. The Sahel countries also need increased long-term development assistance, whereas at present most EU initiatives in the Sahel focus mainly on security and military support and emergency humanitarian assistance.

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Climate Change and Migration Nexus in EU Policy: Opportunities Arising from the post-2015 Migration Agenda

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Introduction

The complexity of the mass human displacements taking place in the 21st century (both internal and cross-border) is doing away with the traditional distinctions between economic migrants and international protection seekers. The blurred boundaries of such mixed movements and the growing number of factors involved as mobility drivers have direct implications on the migration governance models.

Climate change is considered as one of the drivers of human mobility but there is still no clear guidance on how it impacts migration, forced migration and internal displacement and how much weight should be given to it in relation to other pull factors, such as demography, cultural and historical proximity links or to the motivations leading to such displacements.

Sub-Saharan Africa is the fourth worldwide region of displacements associated with disasters and takes the lead on displacements associated with conflict, almost half of the total across the globe (Internal Displacement Monitoring Centre [IDMC], 2015).[1]

In the Horn of Africa and the Sahel, environmental factors, particularly slow-onset hazards (drought, desertification, coastal erosion and land degradation) combined with demographic pressures,[2] terrorism and organised criminal networks,[3] security challenges,[4] loss of livelihoods and other socioeconomic factors work as conflict exacerbators over natural resources. According to some experts, the combination of such displacement risks with structural privation of means to cope with them can evolve, in the long term, into new migration pressures that could turn migration into exodus.

The significant increase in European Union (EU)-bound migration pressures through Central and Western Mediterranean migratory routes, mostly since 2015, reawaken EU relations with the countries of origin and transit of migration in the southern areas in Western Africa, the Sahel and the Horn of Africa, stretching far beyond its traditional partners in North Africa. Migration became one of the most pressing priorities of the EU policy and a new set of strategies and instruments were put in place.

Traditionally, the EU has addressed the impact of climate change on migration patterns as part of the humanitarian and development policies. More recently, the issue has also been calling the attention of security and defence policies but has never been at the top of any agenda.

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1 IDMC has compiled data on internal displacement in the context of sudden-onset disasters since 2008. There are still shortcomings in data collection to predict climate change related displacements. However, if slow-onset hazards could be measured, it would certainly raise this estimate.

2 For further information on this, see Rahmouni Benhida, B. "Pression démographique et changement climatique : impacts et difficultés au Sahel" in this volume.

3 For further information on this, see Halim, A., "Grey Areas in the Sahel: The Security Consequences of Climate Change" in this volume.

4 For further information on this, see Bremberg, N., "The European Union and Climate-Related Security Risks: The Case of Sahel" in this volume.

Against this background, this chapter will focus on the EU responses to climate change and migration nexus. The objective is to outline the changes in the post-2015 EU agenda that could influence the future EU governance on migration as well as the future dialogues with the extended southern neighbourhood.

The chapter is based on analysis of the EU and United Nations (UN) strategic and operational documents as well as on interviews conducted with senior EU officials and other experts. It is structured as follows. First, the scope and boundaries of the climate change and environmentally induced human mobility nexus are assessed. Second, the evolving international governance response to such phenomena is analysed from the initial debates on conferring protective status to a new category of "environmental migrants" to the latest Global Compact for Migration (GCM) pragmatic and flexible cooperation toolbox. The third part maps the development of the EU policy approach to climate change-related migration. The chapter concludes with a set of remarks on new policies and strategies implemented.

Setting the Scene: The Nexus between Human Mobility and Climate Change

The nexus between human mobility and climate change[5] is relatively new (for international agenda setting standards), complex and multi-layered. Its multiple dynamics and forms are reflected in the wide array of non-consensual terminology that put forward: "environmentally induced migration and displacement" (United Nations Environment Program, [UNEP]); "environmentally displaced person" (Zetter, 2011); "climate change-related movement" (McAdam, 2012) or "environmental migrants" (International Organization for Migration [IOM], 2008). The definition of the last concept is as follows: "persons or groups of persons who, for compelling reasons of sudden or progressive changes in the environment that adversely affect their lives or living conditions, are obliged to leave their homes or choose to do so, either temporarily or permanently, and who move either within their country or abroad." This definition is too broad (Cohen & Bradley, 2010; Kälin & Schrepfer, 2012) but can serve as a good working base as it includes all the elements for a possible categorisation and scope of the phenomenon.

A climate event, such as a storm, may cause human displacements but the link between such a hazard and climate change (human cause) is not easy to determine. However, sudden-onset hazards (tropical cyclones, heavy rains, floods, earthquakes and volcanic

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5 The United Nations Framework Convention on Climate Change (UNFCCC) defines "climate change" as "a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to other natural climate variability that has been observed over comparable time periods" (Article (2)). Therefore, making a distinction between climate change attributable to human activities altering the atmospheric composition and climate variability attributable to natural causes.

eruptions) are easier to relate to human displacements than slow-onset hazards (desertification and soil degradation). Reliable data on the latter has been provided in some case studies (Foresight, 2011; Piguet & Laczko, 2014) but it is still arguable whether they constitute a human mobility factor per se or merely a potentiating factor for already existing vulnerabilities related to conflict, poverty, and so on.

In other words, the causality between human mobility and climate change is very hard to establish. Many more causes of people displacement than environmental (hazards or degradation) work together as driving forces compelling people to move (IDMC, 2015): demographics (population growth and density, age), political (weak government, discrimination), socioeconomic (poverty, marginalisation, poor urban planning, expansion of settlements into risk-prone areas) and security (violence, armed conflict, terrorism and trafficking networks). In fact, even if a direct link could be established, human exposure to such hazards is combined with vulnerability or lack of resilience to face such impacts and absence of resources to counter them. Thus, the nexus is context-dependent (The Nansen Initiative, 2015) and environmentally induced mobility is not even among the most determinant among the so called mobility drivers (Kälin & Weerasinghe, 2017).

The term "disaster-related displacement and migration" (The Nansen Initiative, 2015) sheds some light on the debate. First, it assumes that the key trigger of the displacement is predominantly "human" rather than "natural". Second, it differentiates between "displacements" and "migration" in a disaster context. "Displacement" is a last resort for human movements where "the ability of the affected community or society to cope using its own resources" has been exceeded (United Nations Office for Disaster Risk Reduction [UNISDR], 2009) and "migration" can be a strategy (voluntary element of the IOM's definition mentioned earlier) to avoid or adjust to deteriorating environmental conditions that could otherwise result in humanitarian crises or future displacements (The Nansen Initiative, 2015). These cases differ from other forms of human mobility, such as labour migration.

The cross-border element of the IOM's definition is also relevant. Migration implies "the ability to choose between different realistic options" (terminology of the Cancun Climate Change Adaptation Framework, Article 14(f)), even if the voluntary element does not exist and persons are forced to move abroad, such as in the case of the Somalian drought in 2010, the majority of such forced movements take place within internal borders. For instance, in the Sahel well-founded analysis shows that most of the mobility is of an intra-regional nature, where up to 90% corresponds to seasonal

and circular labour migration, often as a resilience strategy to overcome climatic and economic challenges (Shimeles, 2010).

Finally, such movements can be temporary or permanent. The Intergovernmental Panel on Climate Change (IPCC) states that: "if disasters occur more frequently and/or with greater magnitude, some local areas will become increasingly marginal as places to live or in which to maintain livelihoods. In such cases, migration or displacements could become permanent and could introduce new pressures in areas of relocation. For locations such as atolls, in some cases it is possible that many residents will have to relocate" (IPCC, 2018).

In short, the complexity of the nexus between climate change and mobility has obvious implications in finding governance solutions. Human displacements can assume different forms (forced or voluntary, internal or cross-border, temporary or permanent), require a wide range of cross-sectorial policy responses (migration, climate change, development, human rights disaster management and humanitarian relieve) at national and international levels and include all migration phases (Kraler, Cernei & Noack, 2011): pre-displacement (actions to mitigate climate change and strengthen the adaptation capacities of communities), displacement, and return or resettlement of such persons including reintegration or integration processes.

Sustainable responses to such complex policy portfolio require the ability to develop comprehensive instruments that can adapt to multiple logics and cross-cutting interests between North and South, developing and developed countries, and so on.

Framing the Debate: From the Protection Status to the Global Compact for Migration Pragmatic Toolbox

Climate change induced mobility has been on the international and regional agendas for the last thirty years and undergone extraordinary developments for international negotiation standards.

In the first decade of the new millennium the matter was subject to intense debate in several international forums. Research, publications and case studies on the issue were on the rise up to 2012, when they started to decrease (Migration Data Portal, 2019).

One of the most relevant debate triggers in the 1980s stemmed from the definition of "environmental refugees". One of the first and most widely known was the one proposed

by the UNEP expert Essam El-Hinnawi.[6] The prevailing grey areas connected to the causality and scope of the phenomenon, as well as highly distinctive political views, prevented a consensus being reached on a suitable agreement in the global fora. The term "climate refugee" and the rights pertaining to this status have been ruled out of the international agenda. To adapt (or to extend) the international protection rights provided to refugees (by the UN Refugee Convention of 1951 and its Protocol[7]) to forced human displacements as a result of climate change could "jeopardise both" (Guterres, 2012).

The subject was also addressed in the climate change agenda in the early 1990s. The Intergovernmental Panel on Climate Change (IPCC) observed that climate change induced migration was possibly "the most threatening short-term effect of climate change on human settlements" (Rouviere et al.,1990).

The Conference of Parties to the United Nations Framework Convention on Climate Change (UNFCCC) in Cancun (COP 16), held in December 2010, was another key moment in the debate and the first recognition of the potential impacts of climate change on people's movements. The Convention signatory governments were invited to implement, among others, the following adaptation initiatives: "measures to enhance understanding, coordination and cooperation with regard to climate change induced displacement, migration and planned relocation, where appropriate, at national, regional and international levels" (§ 14(f)). Three forms of movements were then formally recognised: displacement (forced movement of persons); migration (voluntary cross-border movement of persons) and planned relocation (process of settling persons or groups of persons to a new location), as well as its several dimensions (national, regional and international). Climate-related cross-border displacement was hereinafter set on the international agenda.

In 2011 and 2012, the Nansen Initiative was launched as part of the commitment of Antonio Guterres, then High Commissioner for Refugees. The result was not as ambitious as it has been originally envisaged due to the aforementioned legal and political implications on such persons' status. Nevertheless, the Agenda for the Protection of Cross Border Displaced Persons in the Context of Disasters and Climate Change came about in 2015 (The Nansen Initiative, 2015; Norwegian Refugee Council, 2011). In that same year, the UN adopted the Sendai Framework on Disaster Risk Reduction (DRR) for 2015-2030 in March, followed by the 2030 Agenda for Sustainable Development in September and the Paris Task Force on Displacement (COP21) in December.

The two-year period 2016-18 saw the launch of the Platform on Disaster Displacement (PDD) and the New York Declaration (United Nations, 2016). The latter raised great

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6 "…those people who have been forced to leave their traditional habitat, temporarily or permanently, because of marked environmental disruption (natural and/or triggered by people) that jeopardised their existence and/or seriously affected the quality of their life," in El-Hinnawi, E. (1985). Environmental refugees. United Nations Environment Program.

7 Forced displaced persons for reasons related to climate change clearly fall outside the scope of the 1951 Convention. In general terms, climate change cannot be included on the grounds of "persecution" stated in the Convention (race, religion, nationality, member of social group or political opinion) since, theoretically, such persons can still rely or seek protection from their national governments in the sense of Article 1 A(2) of the Convention.

expectations on the possibility of implementing a new model of global governance of migration in the 21st century in two Global Compacts, one for migrants and another for refugees, which should also address climate change-related displacements.

The outcome was not legally binding. Climate change-related displacement is addressed in the Global Compact for Safe, Orderly and Regular Migration (GCM, 2018). The definition, scope or legal status of the persons displaced in the event of climate change are still pending regulation.

However, the widespread consensus that climate change has an impact on "human mobility" is now expressed. The general "cooperative framework" (recital 7 of the GCM), the agreed guiding principles for states (at all governance levels) and players in the international community have been established and the interaction thereof with other relevant agendas has been institutionalised and reinforced.

Sudden-onset and slow-onset natural disasters are now both recognised as drivers of forced displacement (paragraphs 19.h, k and l) and specific actions to tackle them are foreseen: improve data and knowledge (h); prepare disaster strategies in cooperation with other neighbouring or relevant countries (j); and address people's vulnerability at regional and sub-regional level (k).

The GCM follows the two main approaches to deal with climate change-related human displacements: "adaptation" and "protection".

The term "adaptation" was visibly borrowed from the climate change terminology[8] and clearly intends to bridge both areas (Kälin, 2018). "Adaptation" in the sense of the GCM refers to the "root causes" of human displacements (not only climate-related) and has been overwhelmingly used in international aid funding. For this reason, the implementation of the GCM must be aligned with the 2030 Agenda for SDG and the Addis Ababa Action Agenda (Objective 23 paragraph 39 of the GCM).

Climate change is seen as an adverse driver and structural factor of migration (Objective 2 of the GCM) and strategies must endeavour to reduce exposure to displacement risks through "adaptation" and resilience strategies prioritising the adaptation in the country of origin (Objective 2 paragraph i) of the GCM).

Such "adaptation" must be combined with the "protection" dimension (Objective 5 of the GCM). Built upon existing practices in Africa, Latin America or Oceania[9] related to

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8 According to the IPCC's terminology (2018) applicable to disaster risk management: "adaptation" in human systems, the process of adjustment to actual or expected climate and its effects, in order to moderate harm or exploit beneficial opportunities.

9 Several countries in such regions already granted humanitarian visas or celebrated agreements (or used existing ones) to facilitate the transit of persons (for example, in the framework of the ECOWAS free movement agreement); others decided to grant ad hoc regularisations of illegally staying third nationals who have experienced natural hazards (Ecuador and Venezuela following the Haiti earthquake), or granted seasonal working permits programmes or residence permits.

forced international displacements, there are several measures for cases where "adaptation in or return to their country of origin is not possible" due to sudden onset and slow-onset natural disasters, respectively (paragraphs (g) and (h) of Objective 5 of the GCM).

In the case of sudden-onset natural disasters, temporary legal migration measures (migration quotas to temporary work permits, humanitarian visas, sponsorships, and so on) built upon humanitarian and compassionate considerations are encouraged.

In the case of slow-onset natural disasters, the need to enhance cooperation to "identify and develop" solutions to improve planned relocation and visa options is mentioned. Planned relocation is being increasingly implemented by governments[10] but it is generally accepted that it should be used as a last resort measure (Ionesco, Mokhnacheva, & Gemenne, 2017; Kälin & Schrepfer, 2012). As for visa options, the examples are scarce and limited to a few seasonal, temporary and circular migration agreements.[11]

In conclusion, it is a highly ambitious (albeit desirable) goal to establish a global international legal mechanism to provide a legal status and protective rights to the persons displaced on the grounds of climate change, as well as a burden-sharing system for resettlements.

Such an objective would have to incorporate legal regimes that would equally assume human displacements as final options (forced displacements) and as adaptive migration strategies to climate change. In practice, "fixing people in their territories" means that human mobility is consistently and systematically integrated in actions and plans designed to reduce their vulnerabilities.

Accordingly, the existing instruments and agendas of climate change and migration must be articulated around three fundamental axis (reducing hazards, exposure and vulnerability), with the corresponding tools geared to diminish the risks of displacement (Kälin, 2018), respectively: reducing hazards[12] through the climate change mitigation agenda of the Paris Agreement, reducing exposure[13] through the GCM and Planned Relocation guidelines. Finally, reducing vulnerability,[14] using the climate change adaptation agendas set out in the UNCCC process, Sendai DRR Framework and resilience-building with the Agenda 2030.

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10 Studies and bibliography on recent cases of planned relocation in Haiti, Vietnam, Ethiopia, Philippines or China can be found in the Migration Data Portal, at https://migrationdataportal.org/themes/environmental_migration

11 For instance, the Bilateral Temporary and Circular Labour Migration Scheme between Colombia and Spain, facilitating labour migration for communities affected by environmental disasters in Colombia; temporary migration quotas (New Zealand and Australia) or the ECOWAS International Transhumance Certificate facilitating cross-border movements for pastoralists.

12 Hazard is "the potential occurrence of a natural or human-induced physical event or trend that may cause loss of life, injury, or other health impacts, as well as damage and loss to property, infrastructure, *livelihoods,* service provision, *ecosystems* and environmental resources" (IPCC, 2018).

13 Exposure is "the presence of people; livelihoods; species or ecosystems; environmental functions, services, and resources; infrastructure; or economic, social, or cultural assets in places and settings that could be adversely affected" (IPCC, 2018).

14 Vulnerability is defined as "the propensity or predisposition to be adversely affected. Vulnerability encompasses a variety of concepts and elements including sensitivity or susceptibility to harm and lack of capacity to cope and adapt" (IPCC, 2018).

The system set by the GCM is a bottom-up approach, successfully identifying climate change and displacement risks at global level, and in addressing the two main approaches: "adaptation" and "protection". The details (the form of the future agreements and arrangements) and the efficiency of the outcomes will depend on the extent of the engagement at national, regional and sub-regional groupings. Indeed, regional systems are always better equipped to employ notions of subsidiarity and to mirror realities that encompass a wide variety of regional dynamics. Such practices and informal policies, now recognised and encouraged in the GCM, can ultimately evolve towards customary law (Apap, 2019) and lead to the emergence of new policies.

Mapping the EU Approach to Climate Change-Related Migration

The nexus between climate change and migration is a long way from becoming a central issue on the EU agenda (Blocher, 2016; Geddes et al., 2012; Geddes & Somerville, 2013).

Three reasons can explain such lateralisation. First, as mentioned in the previous sections of this chapter, the relative novelty of the phenomena, its complexity and persisting grey areas have obvious implications on how it is translated into policies.

Second, the political and institutional roots of the EU's migration and asylum policies. Politically, national sovereign prerogatives and highly divisive national interests have prevented a truly common EU policy on asylum and migration from being carried out by the EU and its institutions "because member states never wanted to" (Labayle, 2011).

Member states always privileged intergovernmental mechanisms for this policy area to retain their sovereign prerogatives. Such a spirit is best exemplified by the English, Danish and Irish opt-outs of several areas of the justice and home affairs policies.

Institutionally, migration and asylum have always been connected to exclusive economic factors related to the completion of the most comprehensive free movement area of the world: the internal market (goods, services, persons and capital), with people's mobility rights having been established primarily for the workers within the EU. The regulation of the entry and integration of third country nationals in this common free area was left to bilateral and national arrangements (Blade, 2004; Naïr, 2016; Peers, 2016) until the entry into force of the Treaty of Amsterdam in 1999.

The asylum and migration policies were then incorporated into the "Community" common policies with the corresponding external powers entrusted to EU institutions, but the decision-making processes lay with the Council by unanimity.

The four dimensions of this newly common policy stated in the European Council Conclusions of Tampere 1999 (Council of the European Union, 1999) were both of an internal nature   creation of a Common European Asylum System (CEAS) and granting fair treatment to third country nationals   and external nature   partnerships with countries of origin and transit (on the top of the list) and the management of migration flows (also in cooperation with third countries).

Third, despite such an institutional framework, the EU's migration policies have progressively focused on managing the irregular flows and "secure" the EU's common borders. The corresponding set of policy options was enhanced to pursue such an objective and included both the external and internal dimensions of that policy.

The First Decade of the Agendas (2005-2015)

The debate on the effect of climate change on migration in the EU began to be addressed as part of the internal dimension of the migration policy in the CEAS. The debate was acquiring momentum in late 1990s and beginning of the 21st century and also on the EU agenda in view of the UNFCCC's negotiations in the Conference of Parties in 2009.

The definition of "climate migrants" or "climate refugees" was also debated in the EU to grant some form of subsidiary protection to people's movements as a result of environmental factors. However, relating climate change with asylum policies proved to be highly divisive among member states and was progressively abandoned (Somerville, 2011) in favour of border security and interior policy concerns (Apap, 2019; Blocher, 2016). The argument is further reinforced by the fact that neither the Temporary Protection Directive nor the Qualification Directive makes any reference to climate change. Thus, the issue is still dealt with as a matter of national legislation of member states.

In 2005, the first landmark of the EU's external migration policy, the Global Approach to Migration (GAM) and its main instrument, the Mobility Partnerships (MPs), did not refer to environmental migration, neither did the subsequent priority actions for Africa and the Mediterranean (European Commission [EC], 2005; Council of the European Union, 2005; Council of the European Union, 2007).

The first strategic thinking on the global effects of climate change came from the first newly-appointed High Representative for Common Foreign and Security Policy (HRCFSP) in 2008, Javier Solana. The Joint Paper on Climate Change and International Security, the "Solana Report", was the first cross-cutting multilevel policy approach to the issue but primarily dealt with security concerns and the involvement of other EU policies from a defence perspective. Climate change was an "additional migratory stressor" and a "threat multiplier" (Council of the European Union, 2008). Since then the issue has been treated from the foreign and security policy perspective (Blocher, 2016; Youngs, 2014).

From the migration perspective, the extensive 82-page Stockholm Programme, the justice and home affairs multiannual strategic planning for 2010-2014, merely addressed the climate change-migration-development triangulation in an effort to understand the effects of climate change on international migration (point 6.1.2 of the Stockholm Programme) (Council of the European Union, 2009). In parallel, the issue was also covered under development aid policies: for example, mass migration into the cities was viewed in the context of food insecurity or deteriorating health conditions (EC, 2003).

In 2012, in the aftermath of the Arab Spring, the external dimension of the migration policy was further enhanced with the revision of the GAM. It was formally adopted in May 2012 and renamed GAMM to include "Mobility" and foreseeable programmes on the management of third country nationals across external borders (students, visitors, businesspeople or family members). Development aid policies and their positive effects on migration were the cross-cutting issues driving the GAMM's policy agenda. Environmentally induced migration was included, but only briefly mentioned as an adaptation strategy "to the adverse effects of climate change" (EC, 2011). In fact, the links of climate change and migration as an adaptation strategy or even from a development perspective were the subject of very little consideration and not included in the policy portfolios of the two main instruments of the GAMM (MP and Common Agendas for Migration and Mobility [CAMM]) (Blocher, 2016).

The GAMM's implementation assessment four years after its creation highlighted modest results and the usual shortfalls: the need to balance the implementation of the MPs with legal migration actions, human rights and refugee protection; and strengthening migration in the bilateral development cooperation agendas of the EU and of the member states when negotiating with third countries (EC, 2014). In sum, the voluntary and, most often, mixed nature of such soft law instruments render them highly dependent on member state engagement and individual interest and will and do not necessarily reflect an EU

perspective (Cassarino, & Lavenex, 2012; Cassarino, 2009; Lisa, 2017; Reslow, 2012; Sousa, 2011).

The "migration" and "security" linkage was also reinforced with institutional changes; migration and asylum policies were constantly placed under the Home Affairs umbrella (Geddes et al., 2012) and the Home Affairs Commission DG was renamed Migration and Home Affairs in 2014. Nevertheless, also accompanying those days' decreasing interest in climate change and human displacement in the international agenda (Migration Data Portal, 2019), concerns associated with migration and climate change were rarely debated in the EU since the GAMM (Blocher, 2016).

The matter was gradually transferred to other policy portfolios. Environmental factors started to become part of the systems designed to protect IDP and DRR management and resilience to climate change within the EU Commission DGs Humanitarian Aid and Civil Protection (ECHO) and Development Aid (DEVCO) (Youngs, 2014). They also became increasingly integrated into the European Neighbourhood Policy (ENP), EU-Africa Strategy.

The idea was to build a cross-sectorial and holistic approach to reduce disasters and vulnerability. Special attention was paid to the most vulnerable regions in the Horn of Africa (Supporting the Horn of Africa's Resilience – SHARE) and the Sahel (*Alliance Globale pour l'Initiative Resilience Sahel* – AGIR) in a joint humanitarian and development effort (EC, 2013).

Between 2007 and 2010, aid cooperation programmes for climate change adaptation and DRR received a total of €355 million, with a significant increase in the funding for DRR and adaptation from €6 million in 1996 to €35 million in 2012 (EC, 2013).

In 2013, the background paper of the Commission on migration and climate change connections that accompanied the EU Strategy on Adaptation to Climate Change was released, arguably following the approach of the UK Foresight report (Blocher, 2016) and accompanying the 2011 development agenda Increasing the Impact of EU Development Policy: an Agenda for Change. Both documents acknowledged the difficulty of isolating climate change as a unique migration driver. It is assumed that the effects on the increasing internal and regional human displacements and large-scale international population movements will primarily be felt in the developing world, "therefore unlikely to occur in the EU" (EC, 2013) justifying to some extent the EU focus on the external dimension of migration to deal with the linkage between "climate change" and human displacements.

The overall approach views migration as a last resort that must be avoided. Migration as a positive adaptive strategy and household resilience policy was also mentioned but the measures (facilitating and targeting remittances, circular migration and other labour schemes) were nuanced following the same course for EU legal and integration migration policies in general. The much less ambitious multiannual Justice and Home Affairs strategic guidelines for the period 2015-2020, approved by the European Council in June 2014 (Council of the European Union, 2014), follow the same path. The external dimension of migration and its connection with development policies leverage built upon the GAMM was reinforced.

The New Agendas in the Wake of the Crisis (2015-2018)

Migration has been discussed in all (informal and formal) European Councils since 2015 and has become one of the most pressing and divisive political issues. The migration pressures resembled in essence, not in scale, the irregular migratory waves to Spain in the early 2000s (Vimont, 2016). Likewise, they were perceived by the EU and its member states as essentially economic and security driven.

A new set of policy strategic instruments was put in place as part of the migration agenda. The EU Agenda on Migration released in 2015 (EC, 2015) was the first strategic response to the irregular mixed and massive inflow crisis, confirming migration as a "primary area" of EU external policy action. Climate change was among the multiple drivers of irregular migration and forced displacement in third countries. Preventive cooperation with such countries was again strengthened and EU relations with the African continent reinforced. The unlikely consensus on the CEAS reform reinforced such predominance.

The Valletta Declaration (Council of the European Union, 2015) Action Plan and the Emergency Trust Fund for Africa (EUTFA) were the first responses to the new reality. The existing regional dialogues, the Khartoum and Rabat processes, were called to play a monitoring role on its implementation. The resurgence of EU-African Union (AU) relations were reaffirmed in the fifth summit in Abidjan, Ivory Coast, in November 2017.

In theory, the Valletta's agenda was a result of a common agreement that balanced all parties' interests from a long-term perspective (Vimont, 2016). To a certain extent it follows the GAMM logic and attempts to overcome its shortfalls and modest results.

The Valletta Declaration had a regional focus, included the main African origin and transit migration countries in three regions (Sahel and Lake Chad, Horn of Africa, and North of

Africa) and agreed 16 wide mid and long-term priority actions (legal migration and mobility, protection of migrants and asylum-seekers, preventive actions on smuggling and trafficking of human beings, cooperation on return, readmission and reintegration), with a financial boost of up to €1.8 billion of the EUTFA. Mitigation and adaptation to climate change were recognised among the "highly interdependent" issues and a common challenge in the relations between the EU and Africa. The Joint Valletta Action Plan (JVAP) detailed this approach and included food security, the promotion of sustainable natural resources and the development of sustainable and renewable energies in this domain. The Senior Officials' Meeting of the JVAP in April 2018 emphasised the DRR initiatives and the need to prevent the negative effects of climate change and land degradation (Khartoum Process, 2018).

In the EU's view, stability and security remain the main critical challenges in those regions, and environmental stress and structural food and nutrition vulnerabilities are considered as roots and results of such instability, often leading to violent conflict over scarcity of natural resources in the region (EC, 2016).

Regular droughts, unpredictable rainfalls, epidemics, overuse of natural resources, degradation of local ecosystems and climate disruption are exacerbating factors with an impact on environmental degradation and natural disasters. For instance, Lake Chad has shrunk by more than 80% in recent decades.

Accordingly, "strengthening resilience"[15] in the EUTFA is one of the four common lines of action for the three regions (the others are economic and employment opportunities, migration management, and governance on conflict prevention) and amounts to the largest share of the resources, €508 million, representing 30% of the total allocations. The economic and employment opportunities are the second largest share with more than 20% (Carrera, Den Hertog, Núñez, Musmeci, Vosyliute, & Pilati, 2018).

At regional level, of a total of €3.59 billion approved programmes, the largest share of €1,721.1 million was earmarked for the Sahel and Lake Chad regions followed closely by the Horn of Africa (€1,286.6 million).

According to the Commission's EUTFA Report for 2017, of the 92 projects committed to the Sahel over half were directed (in almost equal shares) towards strengthening resilience and increasing economic opportunities (EC, 2017). The actions on the former included "community centres or other means of providing them with food and nutrition, security, health, education and social protection, as well as environmental sustainability"

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15 "Resilience" comprises programmes to withstand and adapt to natural and man-made disasters. They include actions on food and nutrition security, strategies on DRR, training on green economy, improvement of natural resources management, and resilience strengthening of vulnerable communities living in arid and semi-arid lands (for example, actions in the Mandera Triangle). They are focused on rural, conflict-prone areas or local and most vulnerable populations (refugees and IDPs). Available at https://ec.europa.eu/trustfundforafrica/region/sahel-lake-chad_en

(EC, 2017). A "comprehensive approach for stability, security and resilience" was also set up, linking relief, reconstruction and redevelopment "in areas particularly affected by current environmental, socioeconomic and security challenges." Climate change concerns also appear in strategic areas with a cross-border and cross-regional focus. Each of the 24 projects implemented across the region under this approach addresses this aspect and has a multi-sectorial focus including resource management.

The signed contracts listed in the annex of the aforementioned Commission Report show that the actions to strengthen resilience to climate change are not among the main concerns. They are mostly associated with food and nutrition challenges and more rarely with local implementation of DRR strategies, but other socioeconomic resilience programmes, such as education, take the lead.

The undeniable positive effects of the resources offered by the EUTF (mostly local) are not the silver bullet to address global multi-layered issues such as climate change-related forced or voluntary mobility; not least migration pressures in general (Pace, 2016). They are a drop in the ocean of the remittance of financial flows to developing countries, traditionally outstripping already huge financial flows from Official Development Assistance (ODA). For this reason, several voices were raised on the real meaning of the EUTFA beside the rhetoric: conditioning third country partners to control their borders and stop the inflows towards the EU and cooperate in the returns, readmission and reintegration (Castillejo, 2017; Guerry & Stocchiero, 2018; Pace, 2016).

The idea of the Commission to efficiently link the direct impacts of EU actions in this region to the challenges in North Africa (EC, 2018a) appears to support the immediate and pressing target of border security in North African countries to be extended further down to the southern neighbours, minimising the actions related to the root causes of migration, namely resilience-building to climate change adaptation and displacement risks in the Sahel.

The new Migration Partnership Framework (MPF) strategy erected the cornerstone of the new EU external dimension of the migration policy, refocused the dialogues with partner countries on a bilateral basis and reversed the former regional Valletta approach logic. This "tailor-made cooperation with African partners […] has been at the heart of the progress made so far" (EC, 2018a).

To some extent, the MPF mirrored the MPs and tried to overcome their shortcomings: remedying the coordination deficit among member states and between national and EU-

levels, while having a more far-reaching scope (Collett & Ahad, 2017). They encompass bilateral and flexible cooperation mechanisms to five initial priority countries (Niger, Nigeria, Senegal, Mali and Ethiopia), including measures to improve border control, step up the fight against smuggling and trafficking networks, increase and improve returns, and address the root causes of migration with a broad policy portfolio, all EU policies in the migration realm.

The External Investment Plan (EIP), adopted approximately one year after the MPF in the reawakening of EU-AU relations, is also addressed to partner countries in Africa and in the EU neighbourhood. The EIP aims to boost investments in job growth and business climate to address some of the socioeconomic causes of migration and is a blending and guaranteeing tool that must meet the Sustainable Development Goals (SDGs). The contribution to the implementation of the Paris Agreement is mentioned and the actions on climate change and sustainable energy and connectivity are foreseen (sustainable cities and agriculture) (EC, 2018b). Nonetheless, 84% of the allocations of the EIP so far for the African Investment Platform reported in 2017 for Sub-Saharan Africa are related to social and education sectors and do not include climate change actions (adaptation and mitigation) or water and sanitation (EC, 2018b).

Concluding Remarks

The impact of climate change on migration patterns has been on the EU agenda for the last decade and has mostly been addressed in humanitarian and development cooperation policies. More recently the issue has also been calling the attention of the security and defence sectors[16] but has never been at the top of any of those agendas.

Following the debate in the international fora, the EU perceives climate change and migration nexus as part of the many drivers impelling people to move from their territories.

The policy focus has been on "fixing people" in their territories to the maximum extent possible and the root causes of migration deserve increasing attention in the post-2015 migration agenda. There has been a significant increase of programmes and funding adopted under the external dimension of the migration policy (EUTFA, MPF, EIP) focusing on the most relevant origin and transit migration countries of the Western and Central migration routes, particularly in the Sahel.

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16 For more information on this, see Bremberg, N., "The European Union and Climate-Related Security Risks: The Case of Sahel" in this volume.

Mitigation of and adaptation to climate change were identified as "highly interdependent" issues and recognised as "common challenges" in the relations between the EU and Africa. The actions in the Sahel on resilience-building and adaptation were given closer attention under such programmes and there has been some support for pre-emptive actions to reduce exposure and vulnerability to climate change and environmental degradation. Such programmes mostly relate to food and nutrition and more rarely to implementing DRR strategies. However, socioeconomic resilience-building still deserves the largest share of this funding.

It is too soon to evaluate the post-2015 migration agenda. Nevertheless, the multilateral and bilateral biases of the external dimension of EU migration policy have some novelties (González, Lisa, Okyay & Palm, 2018, p. 8): "(1) the EU has strengthened the connections between different dimensions of its external action, often 'mainstreaming' migration into pre-existing development and security efforts while underlining the use of the entire set of EU and member states policy instruments to gain leverage vis-à-vis third countries; (2) it has been relying on the increasing use of conditionality, envisaging the development of positive and negative incentives in development and trade policies and linking them to third states' performance in migration management; and (3) greater emphasis has been put on coordinating and joining forces (i.e., assets, existing relations and leverage) of member states with those of the EU as a whole," as well as with supranational partners, such as the UN agencies (the United Nations High Commissioner for Refugees [UNHCR] and IOM).

As for the first two, the increasing focus on bilateral "tailor-made" cooperation and "all EU policies in the migration realm" has raised debates on changes in the ODA's definition to accommodate migration-related expenses. Some grey areas are being pointed out at national and EU levels on the spending devoted to it (Carrera, Den Hertog, Núñez, Musmeci, Vosyliute & Pilati, 2018; Knoll & Sheriff, 2017). Additionally, political pressure to quickly release funding might also undermine the coherence and transparency in reporting the fulfilment of the objectives of the Agenda 2030 that relates to migration.

As for the third, the Commission's evaluation of the EU migration agenda (EC, 2018a) of the past three years has emphasised the added value of an integrated approach (EU, member states, partner countries and international organisations such as the UNHCR and IOM) along the migratory routes as a whole.

The coordination and coherence between the EU, its member states and across policy sectors have always have been the key and the Achilles heel for tangible results in regional and bilateral dialogues with partner countries in migration policies.

In the pre-2015 migration agenda, the legal and institutional framework of the Treaty of Lisbon towards more integration only led to increased protectionism over openness, often involving the policing of the EU southern and eastern borders (Lahav, 2014). The result can be summarised as follows: policy continuity where the "migration dilemma" consistently favours intergovernmental action over integration.

In the post-2015 agenda, apparently, the same course has been followed. At regional and bilateral levels, the dialogues and engagements with the AU and third partner states in the Valletta process privilege bilateral, tailor-made, informal (major soft law instruments, often non-systematically used) over integration where the member states continue to play a leading role.

The magnitude of the pressures and the prioritisation of migration in the EU foreign policy associated with the weak and multi-layered governance of migration policy particularly apparent on climate-related matters pose considerable coordination challenges within the Commission's DGs (DEVCO/EuropeAid/Clima/Interior) and with the European External Action Service (EEAS). The Secretariat-General of the Commission[17] was entrusted with a new coordination role in this realm.

At the global level, the EU does not have a common approach to the GCM, and several member states have opposed or abstained on its approval.[18] The non-binding implementation of the GCM relies on voluntary initiatives from member states or groups of member states, with obvious impacts on how the relations with most relevant origin or transit African countries are and can be conducted.

The great challenge of the Treaty of Lisbon for foreign affairs of "speaking with one voice in international fora" remains, but the response to manage the massive irregular inflows since 2015 brought new types of vertical and horizontal coordination.

First, the effort to improve cross-sectorial coordination on migration in the Commission DGs and with the EEAS can promote in the long run, the "double-hatted" prerogatives of the High Representative of the Union for Foreign Affairs and Security Policy / Vice-President of the Commission (HR/VP) in areas where member states sought to retain a leading role.

Second, the cooperation has been widened to other actors by means of supranational arrangements (for example, the EU-IOM Joint Initiative for Migrant Protection and Reintegration to manage voluntary returns). It can be argued that such a pragmatic

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17 Interview with an EU official, 22 February 2019.
18 Resolution of the UN General Assembly, A/RES/73/195 on the GCM and voting at https://www.un.org/en/ga/documents/voting.asp

approach is meant to overcome differences between member states on the objectives and policy harmonisation on migration but, theoretically, this supranational cohesion from above can work as a pattern changer for an embryonic supranational migration governance offering the possibility of a new EU approach over the bilateral.

The EU is planning to negotiate further readmission arrangements with partners in Sub-Saharan Africa (EC, 2018a). Climate change and disasters represent 13.6% of the worldwide total displacements in the region, and the Sahel as well as the Horn of Africa are most affected (IDCM, 2018). Climate change resilience and adaptation strategies to migration will surely be on the agenda of future negotiations.

The targeted focus on supranational cooperation for returns could be an inspiring practice. The debate on climate change induced mobility, by its nature, fits into a supranational, global regulation area. The EU has a leading role and recognised influence in framing the global climate change policy agenda. Setting the coordination role at the HR/VP on both agendas   external migration dimension and climate change   can potentially promote future approaches that combine both discourses and the pre-emptive, protective and adaptation dimensions.

In this sense, consideration should be given to systematically interlinking both agendas: climate change and migration in the dialogues of the EU and its member states with partner countries in the extended southern EU neighbourhood. Human mobility must be consistently and systematically integrated into plans to reduce hazards, exposure and vulnerability, but also to protect the ones displaced. The corresponding tools are in place with the GCM and must be systematically and coherently combined in a multi-sectorial and cross-cutting approach. The corresponding tools (the Planned Relocation guidelines, the climate change adaptation agendas set out in the UNCCC process, the Sendai DRR Framework cooperation, as well as protection measures for those internally or cross-border displaced people) are in place and must be systematically and coherently combined in a multi-sectorial and cross-cutting approach.

Such a policy portfolio will be the mindset to include climate change and migration agendas in the EU and the relations of member states (or sub-groups of willing member states) with their neighbours in the extended South. The situation currently fluctuates between local and regional vis-à-vis supranational and pragmatic. The open nature of the GCM is there to embrace both. The initiatives on its implementation will surely frame the future governance and certainly the relations of the EU and its member states with its neighbours in the extended South.

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The European Union and Climate-Related Security Risks: The Case of the Sahel

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Introduction

There is mounting evidence that climate change will have wide-ranging and potentially catastrophic consequences for states and societies. According to the recent special report by the Intergovernmental Panel on Climate Change (IPCC) (on the estimated impacts of global warming of 1.5°C above pre-industrial levels), there is high to medium level confidence that several regions around the world will come to experience extreme temperatures, increases in frequency, intensity and amounts of heavy precipitation, and increases in intensity and frequency of droughts (IPCC, 2018).[1] However, it is important to acknowledge that the impacts of climate change on the living conditions for human societies are mediated by non-climatic factors, such as social and political responses, which means that these impacts might manifest themselves in non-linear and highly complex processes. Researchers have pointed out that the adverse effects of climate change might lead to the exacerbation of local conflicts in vulnerable countries as well as heightened geopolitical contestation among great powers over natural resources, trade routes and energy supplies (Barnett, Matthew & O'Brian, 2010; Scheffran et al., 2012; Gemenne et al., 2014; Buhaug, 2015).

Thus, policy-makers and scholars alike are increasingly trying to grasp how climate change is impacting various aspects of international, regional and national security (Dalby, 2009; Diez, von Lucke & Wellmann, 2016; Conca, 2015; Dellmuth et al. 2018). For example, in a speech in September 2018, United Nations (UN) Secretary-General Antonio Guterres said that:

> "Climate change is the defining issue of our time – and we are at a defining moment. We face a direct existential threat [...] If we do not change course by 2020, we risk missing the point where we can avoid runaway climate change, with disastrous consequences for people and all the natural systems that sustain us" (United Nations Secretary General, 2018).

To the extent that international and regional organisations are able to empower states and societies to cope with climate-related security risks (e.g. providing capacities to increase water and food security or mitigate sea-level rise, as well as promoting international cooperation on disaster risk reduction) they are likely to become more salient in the future (Depledge & Feakin, 2012; Mobjörk et al., 2016).

Various international and regional organisations are seeking to address climate-related security risks, and one of the most important in this regard is the European Union (EU)

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1 Climate change is often defined as "a change in the state of the climate that can be identified (e.g., by using statistical tests) by changes in the mean and/or the variability of its properties and that persist for an extended period, typically decades or longer" (IPCC, 2014, p.120). However, what is often referred to when climate change is discussed as a physical phenomenon, albeit with societal origins and consequences, is rather climate-related environmental change, i.e. "a change in biophysical conditions that are or will be affected by a change in the state of the climate" (van Baalen & Mobjörk, 2017, p. 4). For the sake of brevity, "climate change" will be used rather than "climate-related environmental change" throughout the rest of the chapter if nothing else is indicated.

(Bremberg, Mobjörk & Sonnsjö, 2018). As a regional organisation with global reach and aspirations, the EU is among the most vocal proponents of the need to address security risks linked to climate change.[2] Climate-related security risks have been on the agenda of EU foreign and security policy for over a decade[3], and in the EU Global Strategy of 2016 climate change is described as a "threat multiplier that catalyses water and food scarcity, pandemics and displacement" (European External Action Service, 2016, p. 29). More recently the EU has sought to develop policy responses to help member states and partner countries tackle the adverse effects of climate change as well as to cope with climate-related security risks.

This chapter analyses the EU responses to climate-related security risks in the Sahel. The Sahel is of uttermost importance for the EU and partner countries in the Maghreb as the region is now facing a severe humanitarian crisis due to large-scale food shortage and millions of people are forcibly displaced (European Commission, 2018a). Climate change is estimated to worsen living conditions in an already vulnerable region (United Nations Office for the Coordination of Humanitarian Affairs [UN OCHA], 2018).[4] For example, a recent study suggests that several countries in the Sahel (i.e. Chad, Mali and Niger) are currently at risk of "climate-driven instability" due to high dependence on agriculture and the recent history of conflict (Busby & von Uexkull, 2018). Furthermore, the Sahel has been on the EU's foreign and security policy agenda for a long time due to security threats such as terrorist and trafficking networks operating in the region,[5] as well as challenges related to migration.[6] In many regards EU member states and partner countries in the Maghreb, not least Morocco, have shared interests vis-à-vis the Sahel in terms of security and development. The EU's Strategy for Security and Development in the Sahel clearly states that security and development are interdependent in the region, and thus need to be addressed together. In line with this strategy, the EU has dedicated developmental aid and humanitarian assistance to countries in the region as well as several missions under the Common Security and Defence Policy (CSDP).

The chapter is partly based on previous research on EU and climate security[7] and aims to assess the possibilities and constraints that the EU, member states and partner countries face when it comes to finding cooperative solutions to common security risks in the Sahel stemming from climate change. The EU's longstanding relations with

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2 Research on the EU in the field of climate security is still in its infancy but there is extensive literature on the role of the EU in international climate negotiations, see e.g. Oberthür (2011), Bäckstrand & Elgström (2013), Parker, Karlsson & Hjerpe (2017).

3 See e.g. Zwolski & Kaunert, 2011; Liberatore, 2013; Youngs, 2015; Sonnsjö & Bremberg, 2016; Lázaro Touza & Gómez de Ágreda, forthcoming.

4 For an analysis on climate change and demographic developments in the Sahel, see Benhida, B. "Pression démographique et changement climatique : impacts et difficultés au Sahel" in this volume.

5 For an analysis of climate change, terrorist networks and organized crime in the "grey zones" in the Sahel, see Halim, A. "Grey Areas in the Sahel: The Security Consequences of Climate Change" in this volume.

6 For an analysis of EU migration policy towards Africa, see Lisa, P. "Climate Change and Migration Nexus in EU Policy: Opportunities Arising from the Post-2015 Migration Agenda" in this volume.

7 This research has been funded by the Swedish Ministry of Foreign Affairs and has been conducted in collaboration between the Stockholm Peace Research Institute (SIPRI) and the Swedish Institute of International Affairs, see Bremberg (2018) and Bremberg, Sonnsjö & Mobjörk (2018).

countries in the Southern Mediterranean and North Africa mean that a range of policy instruments is already in place that are relevant in relation to adaptation and mitigation efforts. However, the aftermaths of the Euro crisis, the difficult political situation in North Africa after 2011 and the ongoing migration crisis contribute to making Euro-Mediterranean regional cooperation difficult at a time when regional cooperation is becoming more and more important to deal with the many transnational challenges that climate change creates for states and societies in the Sahel and the Mediterranean region. It is therefore of utmost importance to assess the strengths and weakness of EU responses to climate-related security risks in the Sahel and analyse how and under what conditions these responses can be effective.

The chapter focuses primarily on the European External Action Service (EEAS) and the European Commission (EC) in order to assess current developments pertaining to EU foreign policy responses to climate-related security risks in the Sahel. Besides previous research, the chapter builds on an analysis of recent EU policy documents and interviews with EU officials and national diplomats in Brussels and Mali. The chapter is organised as follows. First, the concept of climate security is defined and discussed in relation to international organisations. Second, the evolution of the EU's responses to climate-related security risks within the Union's external relations is analysed. Third, the chapter analyses the EU's approach to climate change and security in the Sahel based on documents and interview data. Lastly, a concluding section summarises the main findings. One important message based on the analysis presented in this chapter is to not overstate the effects of climate change on international migration since available research indicates that "climate migrants" tend to stay within their countries. Further conclusions are that the EU should strengthen its climate risk assessment capability within its early warning system, explore whether the role of EU Special Representative can be strengthened as well as continue to support resilience-building in countries in the Sahel.

The Concept of Climate Security

The term "climate security" is elusive and can mean different things to different people. Among policy-makers and researchers, climate change is often described in terms of a "threat multiplier" implying that it essentially refers to phenomena that exacerbate already existing security risks and threats. This might certainly be an adequate depiction in certain cases but in other instances the effects of climate change might be *the* existential threat facing societies and states, such as island nations threatened by sea-level rise or poor

countries with high levels of substance farming threatened by extensive drought periods (cf. Mobjörk et al., 2016).

Conventional definitions of "security" in Political Science and International Relations (IR) predominately refer to direct, intentional and violent acts (cf. Buzan, Waever & de Wilde, 1998) but climate change typically affects states and societies indirectly by shaping contextual factors. Climate change is moreover an inherently transboundary phenomenon that spans geographical, temporal and sectoral boundaries. The political and social effects of climate change in terms of security depend not only on the scale of climate change but also on context-based vulnerabilities related, for example, to infrastructure, supply chains, institutions and, ultimately, societies' adaptive capacity. The multi-faceted impacts of climate change imply that different dimensions of security, such as state security and human security, may be simultaneously affected (Barnett & Adger, 2007; Dalby, 2009).

The *concept of climate security* therefore needs to be defined broadly so as to encompass risks and threats to individuals, societies and states emanating from the adverse effects of climate change (see e.g. Adger, 2010; Matthew et. al., 2010; Hardt, 2017; Dellmuth et. al., 2018). It also needs to be understood comprehensively, and one way of doing this is to acknowledge that the concept combines both *state* security and *human* security. In the context of climate change, state security is understood as climate-related threats and risks to states' sovereignty and power in the international system. Human security, in the same context, is understood as climate-related threats and risks to individuals and societies due, for example, to famine, disease and disasters. Bridging state and human security, the concept of climate security can thus be said to refer to *the social practices through which individuals, societies and states seek to build capacity to manage threats and ultimately prevent risks emerging from climate change.*

However, it is of course possible to conceive that actions undertaken by certain state actors in order to counter perceived negative consequences of climate change might harm individuals and societies. Inversely, certain aims relating to promoting human security in the light of the adverse effects of climate change could possibly undermine state sovereignty and power. These questions become especially difficult in vulnerable countries where state capacities to address climate change are often low, risks to human security are often high and public trust in political institutions might be lacking. It is not obvious that state and human security are mutually reinforcing when it comes to addressing climate-related security risks and threats in such circumstances, but suffice to say here that any conceptualisation of state security that does not recognise the

primacy of human security is morally dubious (albeit such a conceptualisation might nonetheless serve analytical purposes, e.g. to understand elite perceptions of security threats).

To be sure, the conceptual discussions on climate security are situated right in the middle of the ongoing scholarly debates on the possibly unwanted consequences of securitising climate change. There is extensive literature in IR and Political Science addressing the mechanisms as to why policy-makers choose to securitise political issues (such as environmental degradation and climate change) as well as the promises and pitfalls of narrow versus broad notions of security.[8] The concept of securitisation rests on the insight that societal problems do not yield ready-made interpretations of their nature, scope and consequences but have to be recognised by political actors as being threats or risks to certain societal referent objects (Buzan, Waever & de Wilde, 1998).

Certain political actors might have an interest in framing climate change as a security threat to advance a specific political agenda. For example, a previous study suggests that United States (US) defence actors have sought to securitise climate change to protect perceived interests (Hartmann, 2010). Others suggest that it is necessary to think about how "climatisation" of security, migration and development could be achieved to improve governance responses and international cooperation in relation to climate-related security risks (Oels, 2012). However, neither is it certain that securitising climate change must lead to militarised responses by states and international organisations nor that climatisation of security is necessarily the right way to think about these problems. The definition of the concept of climate security as encompassing both state and human security nonetheless has the benefit of allowing for capturing, comparing and synthesising different contributions in the emerging research field of climate security.

Parts of this emerging field of research seek to explain and understand how climate change impacts on different aspects of international, regional and national security[9]. If international organisations (IOs) are able to empower states and societies to cope with climate-related security risks, we have reason to assume that such organisations will become more important in the future, not least since climate change is an inherently transnational phenomenon (Depledge & Feakin, 2012; Mobjörk et al., 2016; Krampe, Scassa & Mitrotta, 2018). However, previous research on climate-related security risks tends to focus on IOs working in policy areas commonly associated either with state security or human security. For example, climate-related security risks understood to affect state security have been the main focus of studies on security and diplomacy, as well as peace and conflict, whereas climate-related security risks perceived to affect

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8 For an overview of the field of international security studies, see e.g. Buzan & Hansen (2009).

9 See Dalby, 2009; Diez, von Lucke & Wellmann, 2016; Dellmuth et al., 2018.

human security are predominantly studied in relation to development, disaster risk reduction (DRR) and migration (Dellmuth et al., 2018). This means that even though IO mandates cover multiple policy areas, many existing studies typically only link individual IO climate-related initiatives with specific policy areas (see Figure 1).

Figure 1. The emerging research field on IOs and climate security
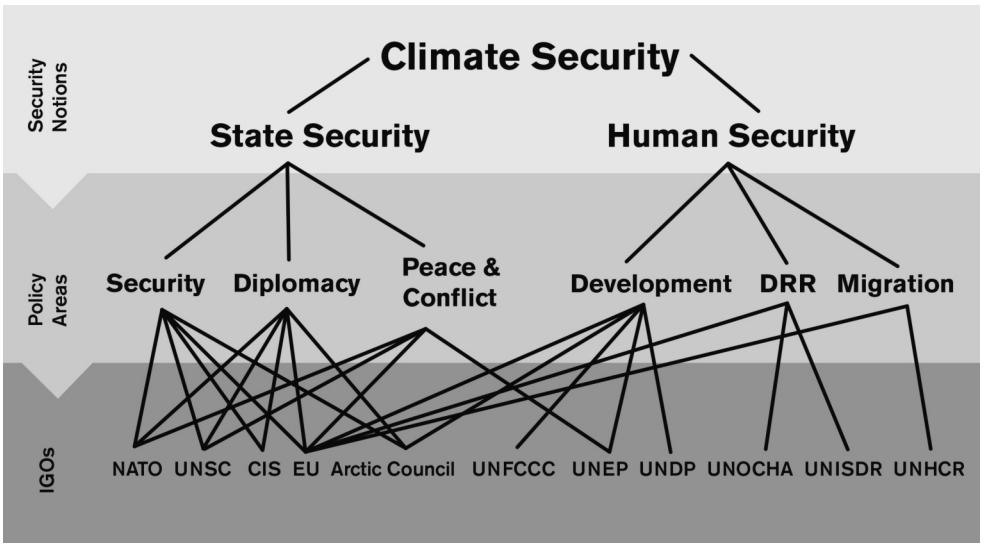
Source: Dellmuth et al. (2018).

The limits of this approach become evident when the role and responses of an organisation such as the EU in the field of climate security is considered. The EU's action on climate change is advancing and, internationally, the EU spans several policy areas ranging from development and humanitarian aid to foreign and security policy. The definition of climate security that this chapter departs from allows for studying the whole range of EU responses to climate-related security risks, even though the empirical focus here is EU responses vis-à-vis the Sahel region and not within the EU and its member states.

The EU and Climate Security

The EU's role in international security expanded significantly after the Cold War when the Common Foreign and Security Policy (CFSP) and the Common Security and Defence Policy (CSDP) were established in the 1990s. In 2011, the European External

Action Service (EEAS) was established to carry out the CFSP (of which the CSDP is part). It was formally launched with the explicit aim of fostering greater coherence in EU foreign and security policy and Union's external actions more generally. The High Representative of the Union for Foreign Affairs and Security Policy heads the EEAS, serves as the Vice-President of the EC and is the permanent chair of the Foreign Affairs Council.[10] In addition to the officials working with the EEAS and the Commission in Brussels, the EU has a vast network of EU delegations with staff in many countries across the world.

In relation to climate-related security risks, it is important to note that the EU is a supranational entity that has the capacity to adopt and implement EU-wide policy. EU decision-making affects or includes nearly all of the climate-relevant policy areas of its member states. For example, the national policies of EU member states on matters related to the reduction of CO2 emissions, energy efficiency standards and international climate negotiations are to a significant extent set, or guided by, the EU. The fact that the EU has exclusive competence over certain policy areas (e.g. external trade) and a budget that represents about 1% of the member states' GDP (approximately €137 billion in 2017), makes the EU a unique international actor, particularly in relation to its influence and actions on climate change.

The links between environmental degradation, climate change and international security have gradually become more salient in EU foreign and security policy. The EU began to acknowledge that climate change has security implications in the early 2000s. While the European Security Strategy of 2003 mentions climate change, a report by the High Representative Javier Solana and the EC in 2008 explicitly identified climate change as a "threat multiplier" (European Council, 2003; European Council, 2008a; European Council, 2008b). Almost a decade later, the EU Global Strategy of 2016 consistently refers to climate change and states that it "exacerbate[s] potential conflict" due to desertification, land degradation, and water and food security (European External Action Service, 2016). The 2016 strategy also points out that the EU should assist partner countries in terms of climate action, for example through the development of renewable energy and technological transfers, as well as climate change mitigation and adaptation. In 2017, the High Representative Federica Mogherini and the Commission proposed that the EU should integrate environmental, climate and disaster risk assessments into its early warning systems in order to be able to identify the impact of these risks and formulate preventive and adaptive measures (European Commission & High Representative of the Union for Foreign Affairs and Security Policy, 2017). In June 2018, Mogherini hosted a high-level meeting in Brussels on "Climate, Peace and Security" that

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10 Federica Mogherini has held this office since 2014. Catherine Ashton held the office from 2009 to 2014 and Javier Solana did so from 1999 to 2009 (albeit with other competences).

brought together political actors and policy advisors with the aim of discussing ongoing and new threats posed by climate change as well as to consider how to achieve forward-looking policy and operational linkages between climate and security.

Nonetheless, "climate security" is not a distinct policy field within the EU but should rather be understood as a cluster of different policy areas linked together by the EU's declared ambition to respond to and prevent climate-related security risks. Previous research suggests that even though the EU has advanced rapidly in terms of developing responses to such risks, it is still not entirely clear what this entails in practice. For example, Youngs (2015, p. 77) notes that "climate-sensitive assessments have not yet been incorporated into CSDP planning." There are indications that the EU has securitised "climate refugees" but this has not seemingly shaped EU migration policies to any significant extent (Geddes, 2015; Trombetta, 2014). However, Bremberg, Mobjörk and Sonnsjö (2018) suggest that EU actions on climate security draw on primarily three EU policy areas: (a) climate diplomacy, (b) development, and (c) security and defence. Figure 2 illustrates how these policy areas relate to each other in the evolution of EU climate security responses in the period 2007-2017.

EU climate diplomacy basically refers to actions undertaken by the EU Foreign Affairs Council (FAC), the EEAS and the EC to shape international cooperation on climate change (e.g. European External Action Service & European Commission, 2011a; Council of the European Union, 2011a). Following upon the UN Climate Conference in Paris in 2015, the FAC adopted conclusions that can be said to advance EU climate security policy by emphasising the direct and indirect international security impacts of climate change in terms of migration, food security and reliable access to resources, water and energy. They also stated that the "strategic and multifaceted threat posed by climate change" (Council of the European Union, 2016, p. 5) needs to be addressed by the EU. The Council conclusions from 2017 on implementing the EU Global Strategy and strengthening the synergies between EU climate and energy diplomacy stress "the urgency to focus on the potential destabilising effects of climate change and the development implications of energy poverty on resilience, security and migration" (Council of the European Union, 2017, p. 4). The Council conclusions from February 2018 confirm this view (Council of the European Union, 2018) and suggest measures to be taken in order to respond to climate-related security risks. For example, EU development aid needs to become more "conflict sensitive," while EU security policies need to become more "climate sensitive." The conclusions also point to the need to integrate effective responses to climate-related security risks across EU policy areas (ranging from climate action and resilience-building to preventive diplomacy and improved risk assessment) (Council of the European Union, 2018).

Figure 2. The evolution of EU climate security policy: 2007-2017

Year	Climate Diplomacy	Development	Security & Defence	General
2007			Towards an EU response to situations of fragility	Council conclusion: EU response to situation of fragility
2008			Providing Security in a Changing World	Climate Change and International Security
2009			Joint Progress Report on Climate Change and International Security	Lisbon Treaty and the establishment of EEAS
2010				
2011	Council conclusions on EU Climate Diplomacy / Towards a Renewed and Strengthened EU Climate Diplomacy		Review of the Instrument for Stability / Council conclusions: Conflict prevention	
2012	Green Diplomacy Network reorganized into EEAS		On the role of CSPD in case of climate-driven crises and natural disasters	
2013	An EU Strategy on adaptation to climate change / EU Climate Diplomacy for 2015 and Beyond / Council conclusions on EU Climate Diplomacy	A decent life for all	Preparing the European Council on Security and / The EU's Comprehensive Approach	
2014			Legislative act: Establishing an Instrument Contributing to Stability and Peace / Council conclusions: The EU's Comprehensive Approach / On the EU Comprehensive Approach and Its Implications for the Coherence of EU External Action	The Junker Commission takes office with HR/VP Federica Mogherini
2015		Council conclusions: A New Global Partnership for Poverty Eradication / A Global Partnership for Poverty Eradication		COP21 in Paris
2016			Council conclusions: European Climate Diplomacy after COP21	A Global Strategy: Shared Vision, Common Action – a Stronger Europe
2017				Council conclusions on implementing the EU Global Strategy

Source: Bremberg, Sonnsjö & Mobjörk (2018).

In order to find examples of initiatives where climate change is incorporated into EU conflict prevention, it is necessary to look at how the EU frames the impact of climate change on fragility and poverty, i.e. development issues (cf. Council of the European Union, 2011b; EC, 2013). The link between peace, security and development is seen as of primary concern in fragile situations and over a decade ago the Commission proposed that the Instrument for Stability (IfS) as well as the CSDP should be used to strengthen the EU's approach to fragility (Council of the European Union, 2007).[11] The revised version, now called the Instrument contributing to Stability and Peace (IcSP), is geared towards supporting third countries build capacity to address specific global and trans-regional threats. In this context, climate change is described as having a "destabilising impact on peace and security" (Official Journal of the European Union, 2014). Thus, efforts are being made to complement the more immediate crisis response strategies with preparedness and preventive action, while at the same time promoting a convergence of the EU's development and security policy. In 2015, the EU outlines a new global partnership for poverty eradication and sustainable development (EC, 2015). Climate change plays a preeminent role here and is argued to have an amplifying effect on the challenges associated with both poverty eradication and sustainable development.

Climate change has also become more salient in EU security and defence policy, and particularly as an aspect of the EU's comprehensive approach to security. Defined narrowly, the approach can be understood as civilian-military cooperation within CSDP missions. However, as the former High Representative for EU Foreign and Security Policy Catherine Ashton stated ahead of the European Council on Security and Defence in 2013, the approach should instead be understood as the use of the many instruments at the EU's disposal "in a strategically coherent and effective manner" (EEAS, 2013, p. 3), where the CSDP is only one of several instruments. Climate change is framed as one of the emerging security threats at both national and international level. One example is the EU's Strategic Framework for the Horn of Africa, where climate change is seen as posing an "additional challenge to all countries in the region" (Council of the European Union, 2011c, p. 4).

In July 2018, the European Parliament adopted a resolution on EU climate diplomacy which clearly stated the need for further EU actions to address climate-related security risks. It particularly stresses that:

> "EU foreign policy should develop capacities to monitor climate change-
> related risks, including crisis prevention and conflict sensitivity [and

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11 The instrument was originally set up to support stability in third countries through crisis response, but the setting up of the EEAS led to a review of the instrument in 2011 (EC, 2011) and in 2014 (Official Journal of the European Union, 2014).

mainstream] climate diplomacy in the EU conflict prevention policies, broadening and adapting the scope of EU missions and programmes in third countries and conflict areas" (European Parliament, 2018).

The Parliament resolution also reiterates that climate change can create new instabilities and conflicts or exacerbate existing ones, due to the scarcity of resources, lack of economic opportunities, loss of land as a result of rising sea levels or prolonged droughts, fragile governance structure, insufficient supply of water, and food and a deterioration in living conditions. It underlines that EU action could and should contribute to the prevention of social, economic but also security risks (European Parliament, 2018).[12]

In terms of climate finance, the EU, member states and the European Investment Bank (EIB) committed about € 20.4 billion in 2017 to climate change mitigation and adaption measures in developing countries, according to estimates from the EC.[13] The Commission also states that the main channel for EU support to policy dialogue and specific, targeted climate action in developing countries is the so-called Global Climate Change Alliance Plus (GCCA+). Since 2008, the GCCA+ has invested about € 450 million in more than 60 country-based and regional actions.[14]

According to Elina Bardram, the EU chief negotiator at the Conference of Parties (COP) to the UN Framework on Climate Change (UNFCCC), the EU's aim is to make the Paris Agreement on Climate Change work in practice and shift the focus from negotiators to practitioners on the ground.[15] Interviews with officials in the EEAS and the Commission confirm this and that the EU will prioritise assisting partner countries to deliver on their "nationally determined contributions" (NDCs) as well as seeking to better incorporate climate risk assessments in the EU's early warning systems, relating for example to land degradation and water shortage.[16]

Officials at the Commission point out that the EU has a strategic interest in enhancing climate mitigation and adaptation actions in partner countries in the southern

12 In 2014, the European Parliament's Committee on Foreign Affairs released a report on the EU's comprehensive approach (European Parliament, 2014). Climate change is described as a driver of national, regional and international conflicts. Interestingly, using the Sahel region as an example, the report concluded that the EU's comprehensive approach should incorporate the concept of human security. This is also in line with the conclusions of an earlier report, published in 2012 by the same Committee, on the role of the CSDP in climate-driven crises and natural disasters (European Parliament, 2012). This report addressed an issue that has figured in discussions on climate security, i.e. the risk of militarisation. However, it should be noted that recent CSDP operations, such as those in the Horn of Africa, Mali and Niger, have been very limited and mainly comprised security sector reform and military training, whereas other crises, such as that in Libya in 2011, did not trigger CSDP operations at all.

13 See European Commission, Directorate-General for Climate Action (DG CLIMA) "International Climate Finance. Retrieved from https://ec.europa.eu/clima/policies/international/finance_en#tab-0-0

14 It should be noted that the EU's climate finance draws on the means of both the Commission and member states, which implies that there is great potential here to make an impact in developing countries although coordination and prioritisation are often difficult to achieve in external actions undertaken by the EU.

15 Presentation by Ms Bardram at the Brussels Dialogue on Climate Diplomacy on Enhancing Climate Diplomacy in a Changing Political Environment, Brussels, 20 November 2017.

16 Interview with EEAS official (Global Issues), Brussels, 22 November 2017; interview with EEAS official (Global Issues), Brussels, 22 November 2017; interview with Commission official (DG Environment), Brussels, November 21 2017; interview with Commission official (DG Environment), Brussels, 21 November 2017.

neighbourhood (e.g. North Africa but also the Sahel) since the adverse effects of climate change will be heavily felt in the region and the EU already has a range of other instruments in place within the region via its European Neighbourhood Policy (ENP).[17] According to officials at the EEAS, it is unlikely that the CSDP will play a major role in EU external efforts to deal with climate-related security risk because military assets are not seen as particularly useful. However, "greening" the military (e.g. developing fossil-free military equipment) and deploying military assets for disaster response are areas in which EU member states are likely to be interested.[18]

Summing up, there is a growing momentum in favour of placing the nexus between climate change and security firmly on the agenda of EU foreign and security policy, and there are indications that the EU is strengthening its efforts to address climate-related security risks in its neighbourhood and in developing countries. In this regard, it is particularly useful to analyse how climate-related security risks are dealt with within the EU's response to the humanitarian crisis in the Sahel and the many security challenges that the region faces.

The EU's Responses to Climate-Related Security Risks in the Sahel

The Sahel is usually described, in geographic terms, as a rather vast region in Africa situated between the Sahara to the north and the Sudanese savanna to the south, as well as the Atlantic Ocean to the west and the Red Sea to the east. However, in political terms and especially when it comes to international cooperation, the Sahel often refers to the five countries of the so-called G5 Sahel group, i.e. Burkina Faso, Chad, Mali, Mauritania and Niger.[19] There are quite obvious reasons behind this more limited focus since this part of the region has for a relatively long period of time been affected by transnational security threats, such as terrorist and trafficking networks, exacerbated by the lack of efficient governance structures in many of these countries. Representatives of states in the region as well as closely situated states have for more than a decade called for international actions to counter these threats. For example, the former Moroccan Minister for Foreign Affairs, Taïb Fassi Fihri, called in 2009 for a "tri-continental approach" to security in the Sahel because terrorist networks in the Sahel cooperate with Latin American drug cartels to ship drugs to Europe through routes in North-Western Africa:

> " [pour empêcher] les organisations criminelles et terroristes d'élire domicile en Afrique de l'Ouest ou dans le Sahel et d'y développer les

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17 Interview with Commission official (DG Environment), Brussels, 21 November 2017; interview with Commission official (DG Environment), Brussels, 21 November 2017.

18 Interview with EEAS official (EU Military Staff), Brussels, 21 November 2017.

19 For instance, the EU Strategy for Security and Development in the Sahel originally focused only on Mali, Mauritania and Niger (European External Action Service, 2011).

routes de trafics en tous genres, ce qui impacte la sécurité de nos pays et, en particulier, ceux de la région […] Les pays concernés, que ce soit en Europe, en Amérique du Sud ou dans l'Afrique de l'Ouest ont tous une responsabilité partagée pour trouver des solutions concrètes à long terme à cette menace " (Moroccan Ministry of Foreign Affairs, 2009).

But the Sahel has been on the agenda of developmental and humanitarian actors even longer than that, even before the terrorist threat emerged due to the many human security risks pertaining to poverty, food security and the vulnerability of local population. In recent years, droughts have hit many parts of the Sahel and have served to deepen the humanitarian crisis. The UN describes countries in the Sahel as being among the most risk-prone to crises and disasters in the world. This is due to increasingly unpredictable weather patterns, frequent droughts and floods and land degradation, which threaten the livelihoods of already highly vulnerable communities. In 2018, it was estimated that 24 million people are in need of humanitarian assistance in the Sahel. Some 32 million people are affected by food insecurity (among them 10.8 million severely food insecure), 4.7 million children are malnourished, and more than 5 million people are said to be refugees, according to the UN Office for the Coordination of Humanitarian Affairs (UN OCHA, 2018). Armed conflicts and violence, such as looming insecurity in Mali in the wake of the coup d'état in 2012 and the long-running conflict around the Lake Chad Basin, contribute to worsening the enduring humanitarian needs. Moreover, droughts cause severe pasture and water deficits in pastoral and agro-pastoral regions, causing herders to change migration patterns that might increase societal tensions (UN OCHA, 2018).

The EU is one of the largest international contributors of humanitarian aid to the Sahel (EC, 2018a). In 2017, the EU provided €240 million in humanitarian assistance to the region and it plans to help more than one million people in need of emergency food assistance. EU humanitarian funding provides water and hygiene systems and training, and ensures screening for children at risk of malnutrition (European Commission, 2018a). Moreover, the EU provides support to the Global Alliance for Resilience Initiative (AGIR), which was launched in 2012 (aiming to achieve "zero hunger" in the Sahel by 2032) and it is also engaged in disaster risk reduction initiatives aimed at reinforcing the capacity of local communities to prevent or prepare for natural disasters (EC, 2018a). In September 2018, the EC announced that it commits an additional €50 million to the Sahel region (and €8 million to the Central African Republic) to address increasing food, nutrition and emergency needs (EC, 2018b). The Commission made this announcement as it noted that the situation in the region has worsened since mid-August this year with

floods affecting Niger, Mali and Nigeria, and a cholera epidemic has been spreading in Niger, Nigeria and Chad over the last few months. EU Commissioner for Humanitarian Aid and Crisis Management Christos Stylianides said that:

> "Ongoing violence and conflict, as well as the effects of climate change, are causing massive displacement, acute malnutrition and food insecurity that is affecting millions, especially children [in the Sahel]" (EC, 2018b).

In terms of development aid, the EU and its member states have committed €8 billion to the Sahel for the period 2014-2020 (European Commission, 2018c). The overarching aim of these efforts is to reduce poverty but also to improve food security and promote sustainable development by supporting good governance (e.g. transparent public finances) and enhancing infrastructure in the region. The EU Emergency Trust Fund for Africa, which was launched in 2015, has also increased the support to the Sahel. The Trust Fund is worth over €4.1 billion (89% of the contributions coming from the EU and around 11% from EU member states and other donors). The Fund's "operational framework" for the Sahel is based on a two-fold logic, i.e. "preventing irregular migration and forced displacement and facilitating better migration management" and "building a comprehensive approach for stability, security and resilience" (European Commission, 2016).

Irregular migration and forced displacement of people might be indirectly or directly linked to climate-related security risks but there is little evidence that climate change increases international migration. For example, estimates indicate that migration flows from Africa to Europe will increase over the next decades but the size in terms of the number of migrants will probably be determined by demographic and political factors to a higher extent than climate-related factors (see e.g. Buettner & Muenz, 2018). The adverse effects of climate change in the Sahel, which are already being felt by people in the region and acknowledged by policy-makers, might of course force people to leave their homes but available research suggests that climate change mainly leads to displacement within a certain region but does not necessarily increase trans-regional migration. In fact, the vast majority of environmental migrants, displaced and relocated persons are expected to be moving within their own country rather than to other countries or even other continents (Martin et al., 2018; Koubi et al., 2016, see also Foresight Project, 2011). For example, a recent World Bank report estimates that "without urgent global and national climate action, Sub-Saharan Africa, South Asia and Latin America could see more than 140 million people move within their countries' borders by 2050" as a result of slow onset effects of climate change (World Bank,

2018). Furthermore, research on conflict displacement indicates that people in general move internally before they migrate to other countries and they also run the risk of becoming internally displaced when returning to their home communities, for example due to prolonged instability, unemployment and destroyed infrastructure. Similar types of migration can already be seen with respect to environmental drivers (see e.g. Ferris, 2014).

When it comes to foreign and security policy, the EU adopted its Strategy for Security and Development in the Sahel (the so-called Sahel Strategy) in 2011. This can be seen as an early example of how the EU has tried to put its comprehensive approach to security into practice. The Sahel Strategy takes as its point of departure that security and development in the region are intimately linked to the point that they cannot be achieved separately from each other (EEAS, 2011). The lack of effective regional cooperation in the Sahel and of state capacity among the countries in the region was also identified as problems on which the EU would focus its efforts. Interestingly, terrorism and cross-border criminal networks were identified as key threats whereas irregular migration was hardly mentioned in the strategy (this, of course, has changed significantly after 2015). However, it also identified climate change as a key challenge facing states and societies in the region, together with extreme poverty, food security, rapid population growth and corruption (EEAS, 2011). In 2014, EU Foreign Affairs ministers decided to extend the Sahel Strategy to Burkina Faso and Chad and in 2015 the Regional Action Plan for the Sahel Strategy was adopted (listing the following key priorities: preventing and countering radicalisation; creating appropriate conditions for youth; migration and mobility; border management; and the fight against illicit trafficking and transnational organised crime).

Following upon the Sahel Strategy, the EU is now supporting several regional cooperation frameworks such as the G5 Sahel (see above) and the Alliance for the Sahel (EC, 2018c). The G5 Sahel was set up in 2014 to foster closer political cooperation in the region, whereas the Alliance for the Sahel was set up in 2017 to improve the coordination of development aid to the region. For example, the EU supports the G5 Sahel Joint Force (which focuses on border control and counter-terrorism) with financial means as well as with military advice and expertise through CSDP missions in the region. The EU also draws on its defence planning capacity and expertise to set up a coordination capacity to assist the Joint Force (EC, 2018c). The so-called Coordination Hub is meant to enable international donors to channel assistance. In practice it works by matching offers of donors to a "Recognised List of Needs" provided and determined by the Joint Force.

Besides these efforts, the EU also currently conducts three CSDP missions in the region, i.e. EUCAP Sahel Niger, EUCAP Sahel Mali and EUTM Mali, which focus on providing training and advice to local security forces as well as offering additional support to the G5 Sahel Joint Force. Finally, EU Special Representative for the Sahel Ambassador Ángel Losada is tasked to help coordinate the EU's overall crisis response to the region on the basis of the Sahel Strategy with the aim to foster "peace, security and sustainable development." The EUSR's mandate includes engaging with relevant stakeholders of the region (in particular G5 Sahel and international organisations, civil society and national governments including with the countries of the Maghreb and the Lake Chad Basin).

The above analysis suggests that the EU does put a relatively strong emphasis on the adverse effects of climate change for both security and development in the Sahel. For instance, the Council conclusions from the Foreign Affairs Council in June 2018 underline that:

> "It is essential to mainstream the nexus between climate change and security in policy dialogue, conflict prevention, development and disaster risk strategies, as well as to fully ensure the linkages to humanitarian action in a region significantly affected by climate change" (Council of the European Union, 2018b).

Researchers tend to point out that there is a risk that too much emphasis on state security measures, for example to fight terrorist and criminal networks or strengthen border control capacity to stem irregular migration, might dilute the efforts to reduce poverty or build societal resilience in the face of climate change (see e.g. Venturi, 2017; Boås, 2018; Lebovich, 2018). However, the strategic focus on the nexus between security and development is undeniably necessary in a region such as the Sahel since short-term security threats and long-term security risks are present at the same time as state capacities are, in general, weak and often insufficient.

As the above analysis suggests, there are indications that EU officials in Brussels as well as in the region are seeking to develop ways in which to further integrate climate-related security risks into EU policies and instruments. For example, an ambassador on the Political and Security Committee suggests that climate security is not at all a controversial issue among EU member state representatives and there is more or less unanimous support behind the idea that the EU needs to be better at factoring in climate change in its foreign and security policy, although the CSDP might perhaps not be the most important EU instrument to deal with such a long-term threat to human security and sustainable development.[20] It is rather the Commission and the EU Delegations in countries in the region

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20 Interview with PSC ambassador, Brussels (telephone), 15 November 2018.

that could address climate-related security risks more effectively through programming and implementation of EU development aid and humanitarian assistance.

EUSR for the Sahel, Ambassador Losada, regularly reports on developments in the region to members of the Political and Security Committee (PSC) in Brussels but, even though climate change is often discussed in these briefings, it is often not discussed at length to the same extent as, for example, political developments in the region and the EU's support to G5 Sahel.[21] Also, an official working with the EUSR for the Horn of Africa underlines that the teams supporting the EUSRs are usually small while the list of tasks is often long, and the individual background and experiences of the EUSRs often affect how they perceive their mandate in practice.[22]

An official at the EEAS working on West Africa describes how the EU's early warning system for conflict prevention now has incorporated climate variables alongside other economic, social and political variables and that the geographical desks at the EEAS as well as EU intelligence officers are involved in assessing the risk estimates that the system produces.[23] But according to this interviewee, the EEAS is primarily focusing its work on democracy promotion and human rights in the Sahel, since the Commission mainly deals with the instruments and tools that are relevant for addressing the adverse effects of climate change.

Another official, at the Commission's Directorate-General for International Cooperation and Development (DG DEVCO), describes how the Commission's main objective when it comes to climate change and development is to assist countries in the Sahel to reform laws and practices relating to land use, agriculture and forestry in order to make them more sustainable. Supporting developing countries to gain further access to international climate finance is also an objective, besides supporting various national and regional projects (mainly in collaboration with the French Development Agency).[24]

Interestingly, an official at the EU Delegation in Mali describes how the team is now more aware of the links between climate change and security in the country and that the work to define its environmental profile will take into account climate-related security risks to a larger extent than before, for example by focusing on re-forestry and agricultural re-structuring.[25] The EU is, at the time of writing this chapter, approaching the end of the current multiannual programming cycle and it is important that climate change and security is further integrated in the next phase, and this is something that the EU Delegation in Mali supports on the basis of its experiences. The official at the EU Delegation in Mali also suggests that highlighting the link between security and climate change ensures that Malian authorities pay attention to the legitimacy. Even though the

21 Discussions with EUSR for the Sahel at the EuroMeSCo Dialogue Workshop, Madrid, 30 November 2018; Interview with PSC ambassador, Brussels (telephone), 15 November 2018.
22 Interview with official at EUSR for the Horn of Africa, Nairobi (telephone), 19 October 2018.
23 Interview with official at the European External Action Service (MD Africa), Brussels (telephone), 28 November 2018.
24 Interview with official at European Commission (DG DEVCO), Brusselss (telephone), 15 November 2018.
25 Interview with official at EU Delegation in Mali, Bamako (telephone), 12 November 2018.

local population might be experiencing the effects of climate change in their daily life there is still difficult to achieve behavioural change, which implies that EU-funded public communication and education about risks and opportunities could be expanded, at least according to this official.

Conclusions

The analysis presented in this chapter indicates that the EU is developing a broad set of instruments and tools to respond to climate-related security risks outside of the Union, particularly in relation to climate diplomacy and climate finance. The security aspects of climate change are increasingly acknowledged by the EU and its member states, and on the basis of the above analysis it seems highly likely that further integrating climate risk assessments in the EU's early warning systems will enhance its role in the field of climate security as it would help prioritise among various development and conflict prevention measures on the ground.

Coordination in EU external actions is often a challenge but the EU's approach to comprehensive security and its toolbox of diverse instruments still put it in a favourable position compared to most other international organisations when it comes to addressing climate-related security risks. This potential would most likely increase if EU member states agree with each other on priorities for climate security and if EU humanitarian and development policies as well as civilian missions within the CSDP were explicitly designed to strengthen resilience to climate-related security risks in vulnerable countries, such as in the Sahel. The proposal from the EC that the next Multiannual Financial Framework of the EU for the period 2021-2027 should aspire to achieve climate mainstreaming across all EU programmes, with a target of 25% of EU expenditure contributing to climate objectives, would in this context be a step forward (see EC, 2018d).

There have been discussions in recent years about whether climate change will increase international migration and whether people fleeing the adverse effects of a changing climate should be granted refugee status. As noted in the analysis above, existing research gives little support to the notion that "climate migrants" will increase international migration flows, as available evidence rather suggests that they predominantly move within their own countries or regions, rather than across continents. Of course, this might change in the future if the adverse effects of climate change are severely exacerbated in regions such as the Sahel, but at least in the short term there seems to be scant evidence

to support the idea that "climate migrants" from the Sahel will move towards North Africa and Europe in large numbers.

Nonetheless, climate change might lead to increased migration within North African countries, which is something that national governments need to consider and here the ENP might be a useful instrument for the EU to further develop its support to ENP partner countries in terms of adaptation and mitigation efforts. Thus, a recommendation that stems from this analysis is that the EU should not overestimate the effects of climate change on international migration but should rather strengthen the cooperation with countries in the Sahel as well as North Africa in order to support displaced populations.

The analysis presented in this chapter also suggests that the EU should strengthen the Union's climate risk assessment capability, for example within its early warning system for conflict prevention. One recommendation in this context is that the EU could explore the possibility of strengthening the role of the EU Special Representative for the Sahel (alongside other EUSRs in vulnerable regions, such as the Horn of Africa and Central Asia) in terms of raising awareness of climate-related security risks among stakeholders in the region (due to his frequent contacts with actors on different political levels and different societal sectors) as well as reporting more systematically to the PSC on how stakeholders are addressing the nexus between climate change, security and development.

Lastly, and especially when taking into account the results in the recent report from the IPCC (2018), which suggests, among other things, increases in intensity and frequency of droughts, the analysis presented above implies that the EU should intensify its support to resilience-building in countries in the Sahel, not least in relation to the fields of forestry and agriculture. This implies that even though the CSDP will continue to be an important tool for the EU to address security threats in the Sahel and promote regional cooperation, it is mainly the EU's humanitarian and development capacities that are of most importance when seeking to address the climate-related security risks that states and people in the region face today, and to an increasing extent tomorrow.

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EuroMeSCo

Founded in 1996 and comprising 102 institutes from 30 European and South Mediterranean countries, EuroMeSCo (the Euro-Mediterranean Study Commission) is the main network of research centres on politics and security in the Mediterranean, striving at building a community of research institutes and think tanks committed to strengthening Euro-Mediterranean relations.

The objectives of the network are to foster influential quality analysis and reflection on Euro-Mediterranean politics and policies; to serve as a platform for dialogue between the members of the network and key stakeholders to discuss the key trends and challenges on the region´s agenda; to increase the impact of think tanks and research institutes and to actively contribute to policy-making through dissemination of research outputs of the network to experts and national, European and international institutions linked to Euro-Mediterranean relations.

The EuroMeSCo work plan includes a research programme with five publication lines (Joint Policy Studies, Papers, Briefs, Spot-Ons and reports), as well as numerous activities, including annual conferences, seminars, workshops, presentations, formal and informal meetings with policy makers on the key political and security dynamics. It also includes   communication and dissemination related activities (website, newsletter and targeted institutional dissemination) to raise awareness and promote the work of the network and to stimulate debate on Euro-Mediterranean affairs.

IEMed.

The European Institute of the Mediterranean (IEMed), founded in 1989, is a consortium comprising the Catalan Government, the Spanish Ministry of Foreign Affairs and Cooperation and Barcelona City Council. It incorporates civil society through its Board of Trustees and its Advisory Council formed by Mediterranean universities, companies, organisations and personalities of renowned prestige.

In accordance with the principles of the Euro-Mediterra nean Partnership's Barcelona Process, and today with the objectives of the Union for the Mediterranean the aim of the IEMed is to foster actions and projects which contribute to mutual understanding, Exchange and cooperation between the different Mediterranean countries, societies and cultures as well as to promote the progressive construction of a space of peace and stability, shared prosperity and dialogue between cultures and civilisations in the Mediterranean.

Adopting a clear role as a think tank specialised in Mediterranean relations based on a multidisciplinary and networking approach, the IEMed encourages analysis, understanding and cooperation through the organisation of seminars, research projects, debates, conferences and publications, in addition to a broad cultural programme.

POLICY CENTER FOR THE NEW SOUTH
THINK · STIMULATE · BRIDGE

The Policy Center for the New South is an independent Moroccan think tank that has the ambition to improve the understanding of political, economic and social issues at the national, continental and international levels.

Created in 2014 under the name OCP Policy Center, the center defends the concept of a new modern, inclusive and open South that defines its own narratives as part of an uninhibited relationship with the world.

Accompanying the dynamics inherent to the new south, the Policy Center for the New South aims to strengthen its anchor, as a force of proposal, to inform decision-makers in the development of public policies adapted to the major challenges of the populations.

The Policy Center for the New South contributes to the production of knowledge aligned with the requirements and needs in line with its mission. Having become a real platform of exchange, the center capitalizes on in-house expertise, resident and non-resident researchers, as well as a large network of renowned partners.