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出國報告（出國類別：其他）

出席「聯合國氣候變化綱要公約第 21 次
締約國大會暨京都議定書第 11 次締約國
大會（COP21/CMP11）」
會議報告

服務機關：交通部運輸研究所

姓名職稱：傅強助理研究員

派赴國家：法國

出國期間：104 年 12 月 3 日至 12 月 11 日

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出席「聯合國氣候變化綱要公約第 21 次締約國大會暨京都議定書第 11
次締約國大會 (COP21/CMP11)」會議報告

著 者：傅強

出版機關：交通部運輸研究所

地 址：10548 臺北市敦化北路 240 號

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主辦機關：交通部運輸研究所

出國計畫主辦機關/聯絡人/電話：

交通部運輸研究所/孟慶玉/02-23496755

出國人員姓名/服務機關/單位/職稱/電話：

傅強/交通部運輸研究所/綜合技術組/助理研究員/02-23496874

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內容摘要：

聯合國氣候變化綱要公約第 21 次締約國大會（COP21）暨京都議定書第 11 次締約國大會（CMP11）於 2015 年 11 月 29 日至 12 月 12 日在法國巴黎舉辦。本次會議之所以受全球矚目與關注，係以前次會議(2014 年)於祕魯利馬舉辦的 COP20/CMP10 會議結論為減緩氣候變遷之影響，各締約國將於次年(2015 年)之 COP21/CMP11 簽訂一項新國際協定，《巴黎協定》，以取代 2020 後失效之京都議定書。

本次出國報告摘錄《巴黎協定》重點內容與各國代表釋出重要訊息。另本報告也專章針對利馬巴黎行動議程(LPAA, Lima-Paris Action Agenda)召開以運輸(Transport)為主題之論壇、SLoCaT (Partnership on Sustainable Low-Carbon Transport) 召開交通運輸日(Transportation Day)，以及其他周邊會議各國官方與企業代表釋出在運輸部門因應全球氣候變遷重要訊息進行報告。

最後，本報告彙結出席本次會議觀察心得，並針對我國運輸部門因應氣候變遷之因應作為提出建議，俾提供國內交通主管機關施政之參考。

本文電子檔已上傳至公務出國報告資訊網

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一、前言

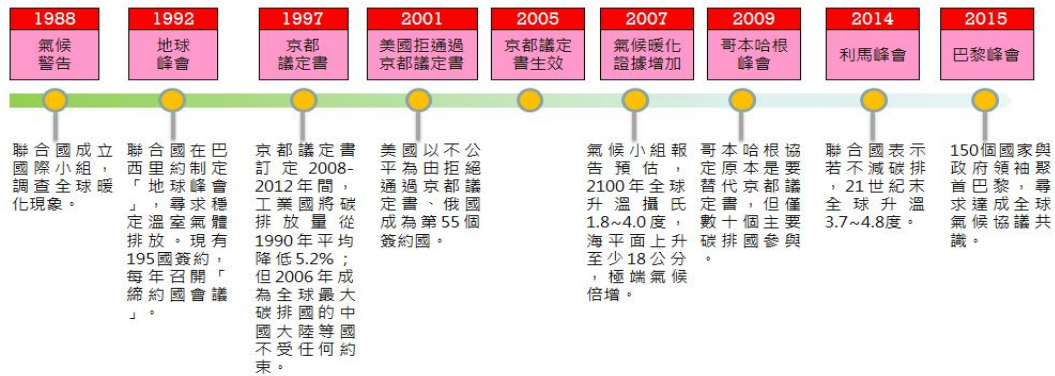
1.1 會議簡介

2015 年聯合國氣候變化綱要公約(the United Nations Framework Convention on Climate Change, UNFCCC)第21次締約國會議(the 21th Conference of the Parties, COP21)暨京都議定書第11次締約國會議(the 11th COP serving as the Meeting of the Parties to the Kyoto Protocol, CMP11)於11月29日至12月12日在法國巴黎勒布爾熱機場展覽中心舉辦(圖 1.1)。



圖 1.1 本次會場外觀

本次 COP21/CMP11 會議之所以受全球矚目與關注，係以前次會議(2014 年)於祕魯利馬舉辦的 COP20/CMP10 會議結論，為減緩氣候變遷之影響，各締約國將於次年(2015 年) COP21/CMP11 簽訂一項新國際協定，以取代 2020 後失效之京都議定書。有關聯合國對抗全球氣候變化之里程碑，茲彙整如圖 1.2 說明。另 COP20 也決議各國必須提出的「國家自定預期貢獻」(Intended Nationally-Determined Contributions, INDC)，爰各國需在 COP21/CMP11 會議召開前遞交 INDC。惟經會前依據聯合國氣候變化綱要公約秘書處評估，目前各國提交 INDC 與達成控制溫升在 2°C 以內目標之排放額度仍有差距，爰更提高了本次 COP21/CMP11 會議協定結果之急迫性。



資料來源：法新社、聯合報。

圖 1.2 全球對抗氣候變化時程圖

本次會議議程除 COP21 與 CMP11 之相關會議外，尚包含第 43 次附屬履行機構會議(Subsidiary Body for Implementation, SBI)、第 43 次附屬科技諮詢機構會議(Subsidiary Body for Scientific and Technological Advice, SBSTA)、德班平台特設工作小組會議(Ad Hoc Working Group on the Durban Platform for Enhanced Action, ADP)，以及利馬巴黎行動議程(Lima-Paris Action Agenda, LPAA)等重要會議與論壇。在此同時，大會針對氣候變化與調適等相關議題規劃有超過 200 場周邊會議(side-event)，提供場域供世界各國、協會機構、企業單位設攤展覽。茲將本次大會重要議程如表 1.1。

表 1.1 COP21/CMP11 會議議程

11/30(一)	12/1(二)	12/2(三)	12/3(四)	12/4(五)	12/5(六)	12/6(日)
開幕式 領袖會議	COP21; CMP11; SBSTA43; SBI43; ADP; LPAA(森林、農業)	COP21; CMP11; ADP; LPAA(減緩)	LPAA(運輸、建築); ADP	SBSTA43 閉幕; SBI43 閉幕; ADP; LPAA(財政、汙染物)	COP21(ADP 結果協定開始); ADP 閉幕; 行動日	休會 運輸日
12/7(一)	12/8(二)	12/9(三)	12/10(四)	12/11(五)	12/12(六)	
高階會議; LPAA(再生能源與效率); 非正式協商	高階會議; LPAA(城市、國家等級以下、科技創新); 非正式協商	非正式協商	COP21; CMP11	COP21 閉幕; CMP11 閉幕	協定結果公布	

資料來源：The United Nations Framework Convention on Climate Change。

本所為持續掌握國際氣候變化相關議題之最新發展，於 2015 年 12 月 2 日至 12 日赴法國巴黎參與運輸相關議題周邊會議(side event)與 12 月 6 日所舉行的運輸日活動，蒐集最新國際運輸部門因應氣候變遷之因應作為，以及提出本出國報告。

1.2 出席代表與分工

我國行政院代表團由行政院環境保護署組團，並由署長魏國彥擔任團長，由駐法國臺北代表處張銘忠大使擔任隨團顧問。其中政府部門包括環保署、外交部、衛生福利部、經濟部、科技部、行政院農業委員會、國家災害防救科技中心、本部則有中央氣象局與本所，各部會之隨行智囊團與工作人員包括工研院、台綜院、綠基會、中國石油公司、台灣電力公司、鼎漢顧問公司、環科顧問公司等，代表團詳細名單茲整理如附件 1 所示。

本次會議會前環保署已依據各部會出席任務安排分組(如表 1.2)，本所列為減緩策略小組，小組組長為農委會張彬參事、副組長為經濟部能源局翁素真組長；會議期間配合團長指示出席相關工作會議，蒐集會議資料，以及編撰與會日誌。

表 1.2 團員任務分工架構

組別	部會	任務/議題
雙邊會談組	外交部	洽邀會談對象時間地點安排會談紀錄，參與氣候公約推案之對外宣揚活動安排。
協商進展庶務支援組	行政院環境保護署、工業技術研究院	會議進展觀察、周邊會議展覽攤位、團務支援
調適策略組	國家發展委員會、衛生福利部、交通部中央氣象局	公約調適政策及因應措施、國際區域調適因應作法、氣候風險指標；極端天氣事件對人類健康影響（公共衛生、病媒蚊疾病傳播與防制）
減緩策略組	經濟部工業局、能源局、行政院農業委員會林務局、交通部運輸研究所	能源產業/製造工業/農林/運輸溫室氣體減量、節能與能效、替代能源、調適行動等
科研應用組	科技部、國家災害防救科技中心	氣候技術中心及網絡
新聞維安組	外交部、行政院環境保護署新聞公關組	國人赴法維安與新聞公關資訊統籌

二、會議重點摘要

全球 195 名締約國代表經兩星期於本次正規會議協商討論後，於 2015 年 12 月 12 日通過「巴黎協定(Paris Agreement)」(詳附件 2)，該協定成為繼京都議定書之後，具有法律約束力的全球溫室氣體減量新協定，協定內容闡述希望在本世紀結束之前，將全球均溫上升控制在不超過攝氏 2 度。巴黎協定將於 2016 年 4 月 22 日起至 2017 年 4 月 21 日開放簽署，於 55 個國家簽署並達到全球排放量的 55%以上後的第 30 天生效。



圖 2.1 場內與會人員作業情形

2.1 《巴黎協定》重點摘要

茲將我國行政院代表團策略減緩組，包括本所、經濟部工業局、經濟部能源局與農委會共同摘錄《巴黎協定》之重點說明如下：

- (一)各國對地球平均氣溫上升的幅度，控制在與前工業時代（1750 年）相比升溫 2°C 的範圍內已有共識，並強調氣候變化對於人類的影響已經非常迫切，各國的策略要更加強力道，目標朝向更嚴峻之 1.5°C。
- (二)同意維護和促進區域和國際合作，動員所有締約方和非締約方利害關係方，包括民間社會、私營部門、金融機構、城市和各地區相關政府主管機關、地方社區和原住民，以大力展開更有力度、更有雄心的氣候行動。
- (三)設立「巴黎協定特設工作組(Ad Hoc Working Group on the Paris Agreement)」，相關分工、工作組織與成員比照適用德班加強行動平台之組織運作方式(Ad Hoc Working Group on the Durban Platform for Enhanced Action, ADP)。「巴黎協定特設工作組」應從 2016 年起與公約相關所屬機構定期共同召開定期大會與相關周邊會議，並應擬訂相關決議草案，透過召開大會時作為公約締約方提出之建議，提供會議各方代表審議與討論。

- (四)要求各國以 5 年為一週期，定期提報新的國家自定預期貢獻。已開發國家將被要求一定得達成目標，開發中國家(如中國大陸、印度等)則被「鼓勵」達成目標。並規定從 2023 年開始，以 5 年一次的頻率檢查各國是否達到了此次協定規定的氣候保護目標。
- (五)決定氣候變化影響相關損失和損害之華沙國際機制 (Warsaw International Mechanism, WIM) 經 2016 年審查之後將繼續運作；並請華沙國際機制執行委員會授權設立一工作組，以與現有公約下機構和專家學者合作，提出為避免/儘量減少/處理氣候變遷造成不利影響的建議。但特別註明損失與損害不涉及責任或賠償。
- (六)為協助開發中國家減少溫室氣體排放，並有能力因應全球氣候變遷影響，在有實質減緩行動和透明監督機制之前提下，已開發國家將共同持續投入至 2025 年之籌資目標，並在 2025 年前，將在考慮發展中國家的需要和優先協助事項之條件下，設定每年最低 1,000 億美元籌資目標。
- (七)決定設立巴黎能力構建委員會(Paris Committee on Capacity-building)，目的在處理發展中國家締約方在目前與未來執行能力上之落差，以及進一步加強相關能力構建工作，包括加強「公約」下能力構建活動的連貫性和協調。巴黎能力構建委員會每年將聚焦於某一項領域或主題以加強能力構建的技術交流，以便瞭解在某一特定領域確實開展建設能力的最新成功經驗和挑戰。
- (八)巴黎協定提出全球 2020 年前的強化行動，包含：促請所有尚未批准和執行「京都議定書多哈修正案(Doha Amendment)」的京都議定書締約方批准和執行該修正案；促請所有尚未在「坎昆協定(Cancun Agreement)」下作出和執行減緩承諾的締約方作出並執行承諾；鼓勵締約方促進締約方利害關係方和非締約方利害關係方在重覆計算「京都議定書」減量額度，做出自願減量承諾，而此亦包括在下個階段之減量額度；促請締約方買賣雙方以公開透明方式揭示國際轉讓之減緩成果，包括用於履行國際承諾的成果，以及在「京都議定書」下的核配減量標準，以期促進環境完整性和避免重複核算；推動已開發國家緊急提供充足的資金、技術和能力建設支援，以加強各締約方在 2020 年之前行動的力度等等。
- (九)巴黎協定亦提到歡迎所有非締約方利害關係方，包括民間社會、私營部門、金融機構、城市和其他次國家級主管部門努力處理和應對氣候變化；並認同為減量活動提供激勵的重要作用，包括像國內政策和碳定價工具。

2.2 會議重要訊息

本次 COP21/CMP11 會議期間，尚觀察到相關涉及運輸部門推動因應氣候變遷業務之重要發展趨勢，包括資金援助與各國家代表對於全球減碳工作之呼籲與宣導，彙整如下：

- (一)眾多國家已經開始著手進行調適方面的財務行動。調適基金(Adaptation Fund)將接受來自德國、義大利、瑞典、瓦隆地區的比利時 7,500 萬美元；法國聲明在 2020 年以前將每年的調適經費提高 3 倍至 10 億歐元；愛爾蘭在 2016-2020 年將確保 1.75 億歐元的調適經費；英國將增加 2016-2020 氣候基金至 58 億英鎊，其中一半用在調適。透過開發銀行的努力，在 2020 年亞洲開發銀行(Asian Development Bank, ADB)的年度氣候基金金額將成長兩倍達到 60 億美元，其中 20 億美元以調適為主；世界八大開發銀行亦證實過去 3 年 55 兆美元的永續運輸投資將提升至 175 兆美元。
- (二)眾多國家代表呼籲各國應建立區域中心與聯網強化彼此間之合作和透明度，每兩年針對各國的國家調適計畫實施做進度報告，並且鼓勵各國與非參與成員之利害相關者(stakeholders)密切合作，以強化調適行動。
- (三)各國對於技術研發與轉讓已經有明確的共識，應透過公私部門的合作，投注更多精力在技術的創新研發。但是，技術轉移的智慧財產權問題仍是需要探討的，例如美國與日本在技術的轉讓部分，仍抱存著高度的保護意識。
- (四)中國大陸主席習近平表示低碳運輸將是中國減少溫室氣體排放的優先策略，中國比亞迪汽車王總裁亦於巴黎行動議程(Lima-Paris Action Agenda, LPAA)運輸會談中指出，中國政府強力支持地方政府推動電動車輛，以深圳為例，預料 2016~2017 兩年內，全市 15,000 輛公車和出租車將全部電動化。
- (五)第 22 屆(COP22/CMP12)將於摩洛哥舉行，摩洛哥交通部長在 LPAA 運輸會談中也強調摩洛哥政府與私人企業溝通協調的成功經驗，在於(a)立法者給予私人企業安全感；(2)私人企業必須做好建立綠能市場的準備，建立電動汽車聯盟；(3)工業與研發部門應該密切合作。

三、運輸部門相關議題觀察

3.1 會議議程

本次會議期間有關運輸部門減緩議題多係由 PPMC(Paris Process on Mobility and Climate)邀集相關人員講演，並安排相關議題討論，總共舉辦了多達 41 場主要與交通運輸有關的會議，當中還包括了 1 場利馬巴黎行動議程(Lima-Paris Action Agenda, LPAA)主題論壇，以及交通運輸日(Transportation Day)，茲將與運輸部門議題相關場次綜整於表 3.1。

值得一提，永續交通運輸議題係本次 COP 會議中首次納入 LPAA 焦點議題(參閱 12 月 3 日議程)，並納入各國元首的對談中，表示自 COP21 後運輸部門於因應氣候變遷之角色受到相當大重視。

表 3.1 運輸部門會議場次

日期	時間	會議名稱
11/30	18:00–20:00	Promoting Low Carbon Transport
12/1	10:00–14:00	Shipping as part of the climate solution
12/2	11:00–14:45	Climate change: a challenge for mobility
	16:45–18:15	Linking ambition to action- Success factors for low carbon development pathways in transport sectors
	17:15–18:45	Mitigating the climate change impacts of urban travel
	18:30–19:15	International Aviation and Climate Change
12/3	9:15–10:30	The world's leading market for EVs – lessons to be learned from the Norway case
	10:00–13:00	Lima-Paris Action Agenda (LPAA) Transport Focus
	10:30–14:00	International Aviation Emissions – its Flight-path to 2 Degrees
	13:15–14:45	Towards a low-carbon transport future: COP 21 and beyond (closed participation)
	15:00–16:30	Transport Decarbonisation as an Engine for Growth
	19:00–23:00	Clean Mobility Reception (Invitation only)
12/4	10:00–13:00	GHG Mitigation in Transport Sector – Roadmap for India
	11:00–12:30	Innovative and Sustainable Mobility: Towards a smart administration of mobility and energy in major metropolis
	12:00–14:00	Fiscal Policies for a Low Carbon and Inclusive Green Economy: The Role of Fossil Fuel Subsidy Reform
	13:00–15:00	Urban mobility policies and climate change
	15:00–18:15	LPAA Focus Day on Short Term Pollutants
12/5	All Day	COP 21- Action Day
	11:30–13:00	Pathways to sustainable mobility through local national and global action
	13:15–14:45	The Path for Low Carbon Shipping

日期	時間	會議名稱
	15:00–16:00	Mayors' Commitment to EcoMobility in Cities
12/6	All day	Transport Day 2015
12/7	09:45–10:30	Fer de France morning debate: Sustainable mobility by 2030, what models for rail transport?
	11:00–13:00	Sustainable Urban Development through Transit Oriented Development
	12:00–13:30	Around the world in 80days climate action in transport of goods
	14:00–15:30	Low Carbon Transport Messages for Governments- Messages from non state actors
	15:30–17:00	Climate Action Takes Flight on International Aviation Day
	16:00–17:30	Green Freight Lean and Green
	17:15–18:45	Integrated Sustainable Mobility in Cities – a practical approach
12/8	13:15–14:45	High-level Advisory Group on Sustainable Transport briefing
	13:30–15:00	High Level Zero Emission Vehicle Event
	16:00–17:30	New Developments in Role of Climate Finance and ODA for Sustainable Transport
	17:30–19:00	Developing a global MBM for aviation at ICAO
12/9	11:15–12:45	Flying clean: limiting the CO2 emissions from international aviation
	13.15–14:45	Fossil independent transports – Sweden's target as a base for global cooperation and efficient emissions reductions
	13:00–16:00	Youth and Mobility: Transport Futures – What's Yours?
	16:00–17:30	Climate Adaptation in the Transport Sector: Accelerating Global Efforts
12/10	10:00–11:30	Translating National Ambition into Local Implementation: Experiences in Mobility and Transport in Latin America
	15:00–16:30	Subnational Cooperation on Clean Resilient Transportation through Zero Emission Vehicles and more

資料來源：Paris Process on Mobility and Climate, 2015。



圖 3.1 場內與會人員參與情形

3.2 會議觀察重點

茲就本所出席代表於 COP21 相關週邊會議蒐集相關資料，綜整運輸部門之相關觀察重點分述如下：

(一) LPAA Transport Focus 會議

利馬巴黎行動議程(Lima-Paris Action Agenda, LPAA) 是秘魯(20 屆)和法國(21 屆)COP 前後任主席國，以及聯合國秘書長辦公室和氣候變化綱要公約秘書處共同提出，其創立目的是透過讓國家階級領導、城市領導、企業董事、協會理事、社會人士交流溝通之平台，以加強因應氣候變遷之相關行動，俾利與本次巴黎 COP21 會亦接軌；此次 LPAA 於 12 月 3 日針對運輸專設討論議題 (Transport Focus)，使各界透過此平台發表針對能源效率、城市交通、道路長程貨運等議題進行交流，而從幾位代表發言可知，運輸部門的節能減碳若要達到抑制升溫 2°C 已是刻不容緩。

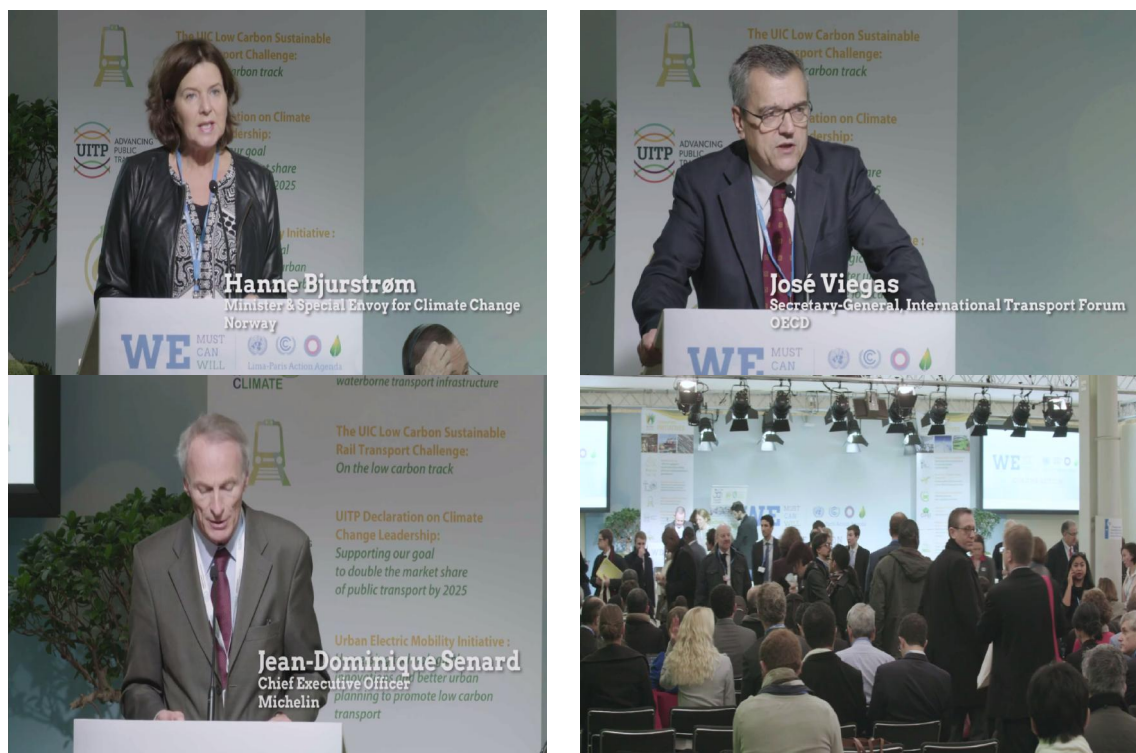


圖 3.2 LPAA Transport Focus 場內演講與參與情形

本出國報告茲整理此次會談重點摘錄說明如下。

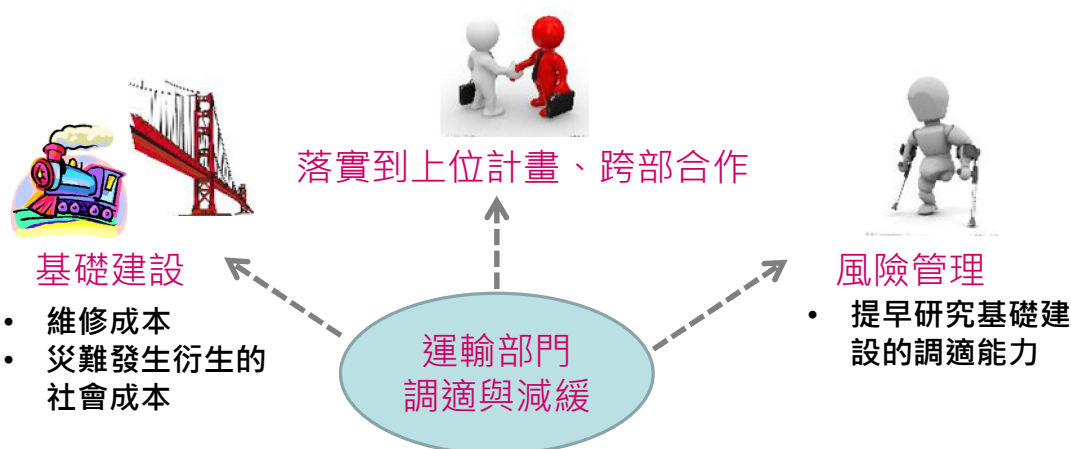
1. 運輸部門重要性

- (1) 國際運輸論壇(International Transport Forum)表示現況的科技雖然已漸趨成熟，還需要透過交通運輸移轉與管理之手段共同達成，以挪威為例，運輸部門占了三分之一的排放，在 2030 年以前應努力減排 40%，就需要透過提倡步行、自行車、電動汽車達成。

- (2) 法國環保部長提到法國政府已表態願意全力協助全球面對氣候變遷運輸部門的節能減碳，並倡導「We Must, We Can, We Will」。在運輸部門成長飛快的情況下，按照此趨勢在 2025 年溫室氣體排放量將從 25% 的全球占比成長到 33%。因此，運輸部門不應再獨立發展，而要透過國際合作、跨部門合作、中央與地方合作、公私部門合作，方能達到減排目標。
- (3) 美洲銀行表示為了讓 INDC 生效，八大開發銀行應該以資金協助永續運輸的發展項目，成立氣候變遷的基金，以宏觀的角度思考綠色交通的融資問題，促進運輸相關產業改革。
- (4) OECD 的 Simon Upton 認為，交通運輸解決方案很多，但真正的問題在於如何成功轉移運具使用，並設法提升大眾運輸使用比例。

2. 運輸部門之調適策略

- (1) 從各國 INDC 所提策略內容中，運輸部門措施多集中在「減緩」作為，但也應該重視「調適」，兩者應該並重。調適策略必須(a)提早研究基礎建設的調適以減緩維修成本和災難發生衍生的成本；(b)納入風險管理；(c)調適策略落實到上位計畫與跨部門合作。
- (2) 另外海平面上升也是重要的問題，應強化水運的基礎設施，並實際透過計畫協助航運事業進行調適規劃。例如秘魯交通部長表示秘魯的交通建設，包括道路系統與水路皆將調適策略納入考量。
- (3) 北歐投資銀行表示非洲的氣溫上升問題預期將減少 4% 的 GDP，以及許多交通建設系統的維修成本增加之問題，需開發銀行更多投資計畫與協助。



資料來源：本計畫整理。

圖 3.3 運輸部門調適與減緩基礎方向

3.長程運輸減緩策略

- (1) 包括陸路、鐵路、航空、水運系統，未來十幾年貨運的排放預料將更趨嚴重，以基礎情境(BAU)下預估到 2050 年將高達 1990 年排放水準之 4 倍，因此必須積極倡導全球物流走向低碳化的綠色貨運。
- (2) 長程運輸的減緩措施包括陸路與鐵路系統使用再生能源、電動貨車、鐵路樞紐中心；航空系統包括空中擁擠管理、機場碳中和計畫；水運系統包括岸電設施、船舶低排放獎勵、低碳港口計畫。
- (3) 鹿特丹交通部長以鹿特丹港口在綠色港口計畫為例，透過集裝箱、碼頭電力控制、風力發電以及船舶 CO₂ 排放標準獎勵機制，提升國內港口低碳發展，同時透過國際合作促進國際船舶減排，例如使用天然氣液化汽油於船舶、貨櫃車輛。鹿特丹在道路系統上也積極推廣自行車，城市裡設置 7,000 多個自行車車位，並建設舒適的自行車道路網，以配合地鐵路線。
- (4) 國際民航組織(International Civil Aviation Organization, ICAO)提出的航空碳中和計畫 (Airport Carbon Accreditation initiative, ACA)，希望每兩年提升航空減排績效，透過航空公司管理，減少空中擁擠。同時，要根據各國的情況制定相應的標準，目前經過碳認證的機場已廣受支持與肯定，全球目前有 134 座機場參與計畫，並且已有 20 座機場取得認證。印度的 Delhi 機場更採用太陽能供應機場電能，成效顯著。
- (5) 國際鐵路協會(International Rail Association ,UIC)認為永續運輸是未來運輸發展的基本價值觀念，需要透過改善跨洲路線這樣的長距離運輸減排，推廣高附加價值的鐵路運輸模式。法國里昂是北歐和南歐的樞紐中心，將更重視鐵路基礎建設發展，而法國鐵路過去 20 年已成功減排 40%，透過智能駕駛、電動、車輛訊息傳遞，未來更要透過交通票證智能化，直接以手機作為交通票證之媒介，推動無縫搭乘交易程序。

4.城市交通策略

- (1) 由於多數城市的旅次長度並不長，提倡 5 公里以內應努力將私人運具轉移到公共運輸+步行與自行車；道路交通應朝向智能城市道路設計的理念發展，推廣共乘系統；公共運輸部門以電動車輛與再生能源為主，特別是行駛里程長的營業用車輛投資效益更大。

- (2) 法國代表表示，法國持續在開發新的技術，現在地鐵 1 號和 14 號線已經啟用自動駕駛，且確實達到減排效果，會持續推動全地鐵線路的自動化；法國的巴士已有 4,500 輛天然氣巴士，同時，積極與製造商溝通，努力合作新技術的研發，APP 技術的進步也是公共運輸智慧化的重點。
- (3) 盧森堡市長表示盧森堡一樣存在大城市的共同問題，交通壅堵，而盧森堡的平均旅次長度僅 5 公里，更要大力推廣自行車的使用。

5. 加速推動低碳車輛

- (1) 電動車輛、天然氣車輛、油電混和車輛等低碳車輛已陸續在全球推動的成功經驗，值得持續加速推動。中國比亞迪汽車總裁表示，目前中國整體公共運輸的車輛數僅占 5%，但 CO₂ 排放約占三分之一，貨運物流車輛數約占 17%，CO₂ 排放約占三分之一，小客車數量 80%，CO₂ 排放約占三分之一；然而，公共運輸與貨運物流的平均旅次長度卻遠超過小客車。因此，中國政府強力支持地方政府推動電動車輛，以深圳為例，預料明年或後年，全市 15,000 輛公車和出租車將全部電動化。
- (2) 雷諾汽車總裁表示，為了鼓勵電動汽車的使用，雷諾汽車持續研發電動車輛，推銷電動車輛市場，努力提升系統的穩固性，特別是充電套件，以提升續航能力、電力穩定、加快充電時間、方便充電。
- (3) 政府在加速推動低碳車輛扮演關鍵角色，必須由政府與企業雙邊合作，以優惠和補貼政策方式，鼓勵使用者轉移。挪威設定目標在 2050 年所有的車輛都成為低碳車輛，惟困難度雖高，但至少 2015 年已有一半的挪威新車是油電混合車，積極鼓勵綠色購車政策。
- (4) 值得一提的是，二手車輛的市場仍受到消費者的歡迎，但二手車輛往往造成更多的空氣污染，未來要推動低碳車輛，對於二手車輛市場該如何做，值得省思。
- (5) 智利交通部長分享智利推動經驗，智利運輸部門碳排放占全國三分之一，其中有 80% 仰賴公路運輸，因此積極推動貨運卡車的綠色化，使用再生能源，同時還建立的車牌上標示能耗與碳排的機制，實施所謂的車輛污染稅，車牌上能耗與碳排越多的車輛，就得交付更多的污染稅。
- (6) 智利交通部長也指出開發中國家正在面臨經濟快速成長下所帶來的環境衝擊，如何平衡經濟成長和減排成為最大的挑戰。已開發國家不僅

是在技術上提供財務支持，也應該停止販售部具有能源效率的車輛給開發中國家。

6. 總結

- (1) 與談者談到如何轉化運輸部門依賴的化石燃料到再生能源是相當重要的課題，且綠色運輸的成長可能伴隨著犧牲經濟成長。與談者們也點出調適在運輸部門之重要性，政府應該設定調適相關評估架構與目標，並且推動永續運輸朝著預期目標前進，且運輸部門的調適應該更被重視。
- (2) 米其林企業總裁表示，政府和企業應合作支持交通的轉型，透過融資幫助城市發展，多方交流的互助合作要持續進行；摩洛哥交通部長有一段令人激賞的發表，經過摩洛哥實際與地方私人企業溝通協調，了解到(1)立法者應該給予私人企業安全感，例如碳市場；(2)私人部門必須做好建立綠能市場的準備，建立電動汽車聯盟；(3)工業與研發部門應該密切合作。
- (3) 法國政府將會鼓勵公司企業建立電動汽車產業，並預計投入 7,000 萬歐元於發展電動車，以有助減少城市之交通排放，雖然這做法並不會對交通擁擠問題有幫助，但至少交通擁擠造成的排放將減少。另一方面，現有運輸模式轉變至到低碳運輸還能夠帶來工作機會的成長。
- (4) 與談者們也提及中產階級屬於較傾向擁有私人車輛的族群，要如何引導他們轉型是重要的。永續城市需要妥善的城市交通規劃，在大數據資料興起的時代，更要透過大數據整合交通運輸，提高中產階級使用公共運輸的興趣和誘因。
- (5) 歐盟代表表示，未來歐洲交通運輸願景是要實現方便的旅行環境，已制定歐盟交通白皮書，提出四大要點：(1)車輛燃油效率的提升；(2)清潔能源的使用；(3)以交通組織創造創新的商業環境；(4)實現運具轉移的交通思維。要實現目標，期望能夠制定國際標準，降低外包成本，各國團結合作，不再單打獨鬥。
- (6) 最後，由聯合國總結，現在我們已經是連結在一起了，交通問題造成巨量的 CO₂ 排放增長，占比四分之一之外，交通運輸產生的懸浮微粒子更對人體的健康造成嚴重影響，交通運輸的模式必須改變，從以車

為本改變為以人為本的交通思維，在國際合作上，透過碳價格改變銷售或生產模式，創造低碳運輸的未來。

(7) 總結本次 LPAA 會議各國代表分享的運輸部門的永續運輸發展策略，並聚焦在轉變城市運輸之旅運模式，說明如圖 3.4；另一方面在運輸技術創新與研發部分則包含電動車輛、再生能源、智慧型運輸系統 (Intelligent Transportation System, ITS)，說明如圖 3.5。



資料來源：本計畫自行整理繪製。

圖 3.4 低碳交通旅運模式之施行策略



資料來源：本計畫自行整理繪製。

圖 3.5 運輸部門技術創新與研發策略

(二) 2015 運輸日(Transport Day 2015)會議

12月6日舉行運輸日會議係接續綜整前述PPMC (Paris Process on Mobility and Climate)提出的六大運輸部門重點議題的討論。會議揭幕時提出兩項對各國運輸部門因應氣候變遷時代之期許：(1) 由於運輸科技持續發展情況下，運輸部門節能減碳措施應建立時間標準檢視，滾動檢討部門目標；(2)為了讓公共運輸能夠與私人車輛對抗，應該善用公共運輸資訊力量，並透過媒介傳播，例如智慧型手機。

另有代表提出都市運輸部門之發展方向，除了限制車輛能夠使用之道路與停車空間，同時需公共運輸、步行與自行車之基礎設施等投資。其次，使用者層面上，應重新定義公共運輸的需求面，並且永續運輸需要政府努力與企業投資，以及社會支持。開發中國家面臨的挑戰，除了基礎建設之缺口外，尚包括文化、社會、教育等缺口，而此些條件在永續運輸發展過程上，需要齊頭並進落實的。



圖 3.6 Transport Day 2015 場內演講與參與情形

本次會中針對 7 項各國運輸部門因應氣候變遷之努力方向提出建議，茲彙整如表 3.1，以下在就此 7 項議題進行說明。

1.發展電動車輛

- (1) 電動車輛仍屬於發展階段，目前市場佔有率仍不高，發展的關鍵在於要拋開傳統的運輸思維，重視其能源成本的效益，以及其規模經濟特性。
- (2) 解決方案應在政策面從改善法規、運輸需求管理、減少高排放車輛的步驟如經費補助著手，技術方面及車輛技術、電動化設施、充電能力改善著手。例如充電設施尚有眾多進步空間，有研究顯示人們更傾向於能夠直接在家裡充電的方便性。

2.改變現有低碳運輸的商業經營模式

- (1) 現有的低碳運輸商業模式仍欠缺對於氣候變化影響的考量，在陸路、鐵路、空運、航運各方面均應納入風險管理。
- (2) 應透過組織協調架構的再次調整，例如設置單一窗口，讓各單位取得資金的途徑更為迅速、方便。

3.強化步行和自行車運輸系統

- (1) 永續運輸不僅能減碳，更能提升安全，但要落實人本交通，需要政府的支持與落實，盧森堡的成功便是得利於政府的大力支持。
- (2) 為了要促進步行和自行車，除了政府支持投資的相關建設，還要宣導與強化人們培養步行出行的意識。

4.提升運具的燃油效率

- (1) 燃油效率具有節省數兆成本並增加共同效益之巨大投資潛力。政府部門除了設立燃油效率標準和科技發展外，在技術已經成熟且足夠的當下，更應提高誘因促使政府與私人部門的共同合作。
- (2) The Global Fuel Economy Initiative (GFEI)分享他們最近研究報告指出，2030 年新車的燃油，比 2050 年所有汽車高出兩倍時，若全球整體車輛燃油效率改善，全球於 2015~2050 期間年將能節省 330 億噸 CO₂ 排放，相當於 2 兆美元的燃油節省成本與 5,000 億美元的電動汽車的轉換成本。
- (3) 此外，2050 年輕型車輛預估將是現在的 3 倍(BAU)，惟透過適當政策和管制，是可望使得輕型車輛成長數目減半。

- (4) 不同國家對於能源效率的認同程度不同，推動燃油效率仍存在許多的阻礙，例如在地方政府層級鮮少有領導階層重視此議題。

5. 鐵路運輸減碳

- (1) 鐵路運輸要減碳，需要建立更多跨運具整合的思維，投資決策也要考量到外部成本。
- (2) 世界上有很多鐵路現在是沒有被使用的狀態，但他們仍然是有利用價值的。如果能夠結合道路和鐵路複合運輸乘客和貨物，將可以更發揮鐵路的存在價值，善用鐵路運輸的低碳特色。

6. 低碳城市的規劃與執行需要中央與地方攜手合作

- (1) 全世界約三分之二的人口住在城市內，城市的高度排放備受關注。推廣低碳運輸給人民，不能僅從運輸面推廣，從健康面推廣往往能讓民眾更加意識到私人運具增長對環境帶來的衝擊。
- (2) 若要達成低碳城市計畫，應由中央、地方、企業、社區共同互助合作。

7. 重視運輸調適政策的財務永續

- (1) 氣候變遷對地球影響的意識已經萌生，應變的工具也已發展，且已開發和開發中國家或多或少皆已具備。在調適部分的解決方案，必須要從長遠的角度思考，各國資源朝向共享與整合的方向努力。
- (2) 在愈來愈多極端氣候的影響下，不僅是建設維護成本，以及提供服務受到干擾中斷，相關衍生社會成本也增加。
- (3) 強調展現調適在交通運輸重要性的積極正面論述，將技術工具與資源共享與整合。

表 3.2 運輸日七大交通領域總結

發展電動車輛	鐵路運輸減碳
<ul style="list-style-type: none"> ● 電動車輛整體發展規劃(法規、管理、車輛充電設施) ● 公共巴士與機車(二、三輪) 	<ul style="list-style-type: none"> ● 建立鐵路與跨運具整合思維 ● 投資決策考量環境外部成本
改變現有低碳運輸的商業經營模式	低碳城市的規劃與執行需要中央與地方攜手合作
<ul style="list-style-type: none"> ● 改變商業經營模式，財務規劃需考量風險不確定性 ● 簡化資金取得流程，讓各單位取得低碳運輸資金的途徑更迅速、方便 	<ul style="list-style-type: none"> ● 重視中央與地方合作議題 ● 減緩措施由下到上的分工合作
強化步行和自行車運輸系統	重視運輸調適政策的財務永續
<ul style="list-style-type: none"> ● 可減碳、提升安全，需政府大力支持 ● 重視步行與低碳運輸系統的重要性 	<ul style="list-style-type: none"> ● 制訂長期發展計畫 ● 技術工具與資源共享與整合
提升運具的燃油效率	
<ul style="list-style-type: none"> ● 技術已成熟，但誘因不足 ● 促使公私部門合作 	

資料來源：Transport Day 2015 Paris。

(三)其它周邊會議重要討論議題

除了前兩場在運輸部門之重要會議之外，回顧今年 COP21 在交通運輸周邊會議，大致可聚焦在以下 6 項議題：

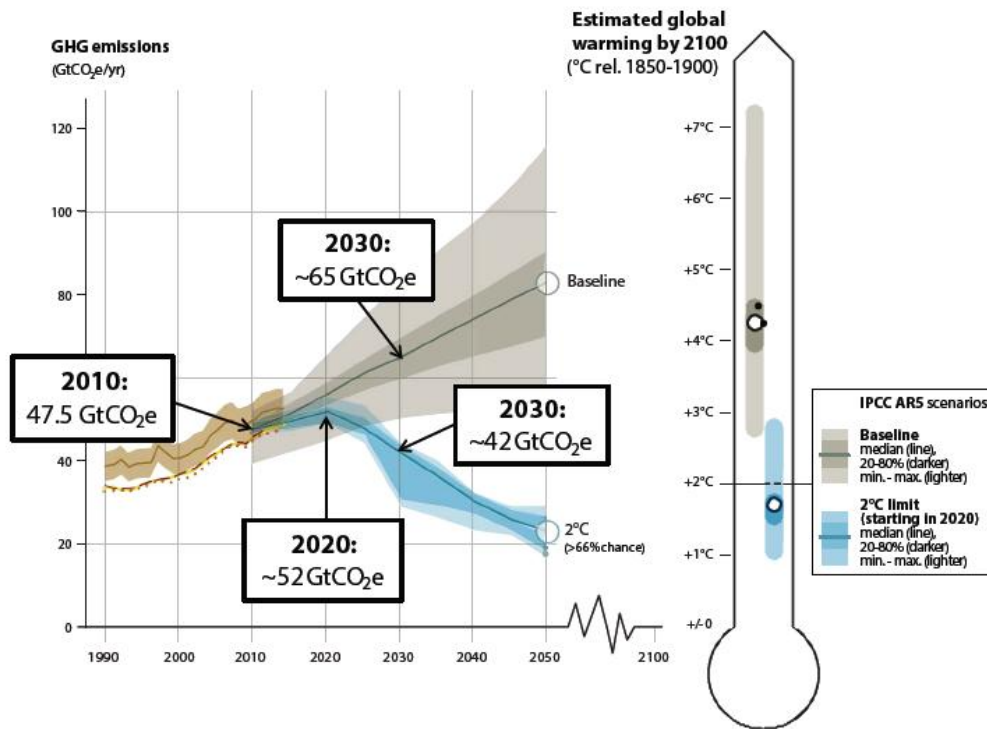
- 1.運輸部門因應氣候變遷之迫切性(Urgency and Timeliness of Action on Transport and Climate Change)
- 2.運輸部門節能減碳(Decarbonization of the Transport Sector)
- 3.運輸部門氣候變遷調適與減緩(Adaptation and Climate Resilience in the Transport Sector)
- 4.都市運輸連結與可及性(Transport's Connectivity and Accessibility)
- 5.運輸科技創新與研發(Technological Dynamism and Innovation for Transport)
- 6.低碳運輸的融資與經濟效益(Finance for Low Carbon Transport and Economy-Wide Gains)

以下茲將周邊會議中與會場所蒐集資料，按議題內容摘錄如下：

1.運輸部門因應氣候變遷之迫切性

- (1) 氣候變化未來將對地球造成的碳排放量與升溫效應將持續擴大，由圖 3.7 可知，基礎情境(Baseline)下預估 2030 年 CO₂ 排放量達 650 億噸，同年升溫將達到 4°C 以上，而運輸部門在全球溫室氣體排放占比 23%，責無旁貸；若成功的將溫度抑制到僅升溫 2°C，則在 2020 年 CO₂ 排放量達到 520 億噸之高峰值後逐年下降。
- (2) 運輸消耗了全球 60%的石化燃料， 27%的能源消耗，以及四分之一的 CO₂ 排放，運輸部門勢必得加速行動，且應該在 2020 年以前有具體的成果。
- (3) 由脆弱度較高國家組成 Climate Vulnerable Forum (CVF)，在 COP21 聲明本世紀中應積極減碳，希望升溫為 1.5°C 的氣溫，並提供了一個 3 年的行動地圖，朝著以互相合作的方向達成脆弱度高國家減緩氣候變遷影響之目標邁進。但是由於國際目標為 2 度 C，CVF 提出在 2020 年以前應建立確保達標的機制，並且每 5 年檢視，也需要 100 億美元的氣候基金的支持。
- (4) 目前只有少數國家(中國、智利、墨西哥、摩洛哥、美國)在 INDC 明確提及短期污染改善。世界衛生組織指出減少這些污染對於身體健康的

效果時即時性的，因此甲烷 CH₄ 和懸浮微粒 PM 應該要納入到氣候變遷之討論。



資料來源：The United Nations Environment Programme (UNEP) 2014 Emissions Gap Report。

圖 3.7 全球碳排放與升溫趨勢分析

2. 運輸部門節能減碳

(1) 低碳運輸發展之重要性

- 運輸部門 2013 年約佔全球溫室氣體排放總量的 23%，運輸部門極度仰賴石化燃料，約佔全球燃料的 60%，而在全球持續增長的運輸需求環境下，預料交通運輸的排放仍將持續增長。投資永續運輸雖然能夠對未來有高度的經濟價值，但在政策實施的難度也高。
- 在“MobiliseYourCity”計畫中至少 100 個城市同意縝密的永續運輸計畫，在 2050 年要讓城市的排放達成 50%到 75%的減量改善。畢竟，城市交通占運輸部門整體排放的 1/2，全球有 2/3 的人口居住於城市內，在全球城市化的發展趨勢下，未來的城市將愈來愈多，人們對運輸的需求也會愈來愈多，對城市交通的減碳作為重點著手是必須的。
- 各國低碳運輸推動狀況：
 - 中國視低碳運輸將是減少溫室氣體排放的優先策略。

(b) 巴拉圭將藉由復興公共運輸減少燃油消耗。

(c) 韓國濟州島，將轉換為一個零碳島，所有的車隊將採用電動車輛，並且全部改採用再生能源。

(2) 綠色貨運

a. 企業代表列出 3 項該綠色貨運之發展機會：加強貨運營運效率、轉移公路貨物為海運、使用再生能源。貨運企業代表也表示願意開放接受新的管制措施來因應全球化的市場機制。

b. 挪威氣候與環境部長指出，海運包含在該國的 INDC 中，並且提出正在施行策略，例如增加能源效率、研發電動客運渡輪；法國海事航運部長也強調海運運輸的碳足跡必須減少，在 2020 前減量 20%。

c. Lean and Green Europe 組織自 2008 年起致力於 5 年內減少 CO₂ 排放 400 億噸目標，該組織目前由 450 個業者所組成，業者們彼此之間會互相分享好的作法，包括先進的車輛技術、替代燃料、車輛維修、環保駕駛、車輛標籤、路線與期程安排、模式轉變。

(3) 城市交通和土地使用息息相關，減少交通量並不是一個唯一解，更需要透過交通管理手段才能發揮真正的效果，因為減少通勤旅次的時間，才是真正達成有效轉移運具的方法。另外，法國代表指出交通政策必須和土地使用政策整合，否則看似只會造成短期衝擊的交通建設，但所換來的影響是非常長期。

(4) 氣候變遷干擾和科技創新將對交通運輸帶來轉變，轉變旅運者運輸行為係最具有減碳效益，預估可減少 18-30% 的 CO₂ 排放，其中，公共運輸系統的推動扮演關鍵角色，因為轉移私人運具到低碳運具，以及共乘系統能夠對減碳創造極高效益。另一方面，計程車如何達到最高效率之應用，俾減少空程，也應予以關切。

(5) 針對各周邊會議對城市交通、陸路運輸(公路、鐵路)、航空運輸、海運運輸所研提節能減碳措施與方向，可歸納如圖 3.8。



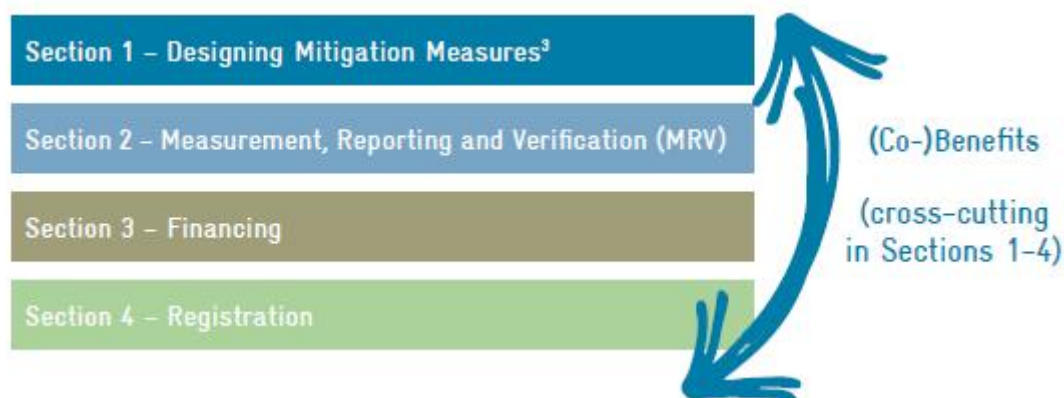
資料來源：本計畫整理。

圖 3.8 運輸部門節能減碳措施與方向

3. 運輸部門氣候變遷調適與減緩

- (1) 交通運輸系統營運易遭受氣候(暴雨、高溫、強風與低能見度)之影響干擾，無論係鐵路或公路運輸系統皆不耐極端高溫、冰河與風暴，對於極端氣候相當敏感，而交通運輸系統能否承受氣候變遷的影響，皆與基礎建設息息相關，並全世界平均每年花費 1.4~2.1 兆美元在交通基礎建設。目前，各國運輸部門普遍將減碳目標放在“減緩”，需要藉由 COP21 召開，呼籲運輸部門調適之重要性。
- (2) 目前預估每一年在調適的成本約耗費 70-100 億美元，可能過於保守。因為這個預估其實忽視了調適的風險所帶來的其他損失。提高交通運輸的調適措施有助於確保長期的減排投資成功。交通運輸的調適政策工具應是對能源效率和氣候變遷的風險給予實質補償，例如賦稅。調適能力關鍵包括能力建構、資料蒐集與產出、決策模組建立 3 項。
- (3) 對遠程因應極端氣候考量下，各國應及早在上位計畫政策與規劃交通基礎設施的減緩之改善。例如，挪威係將調適作為統一納入較大之執行計畫，而非事後處理。
- (4) SBSTA(Subsidiary Body for Scientific and Technological Advice)建議籌一個跨部門組織共同合作，思考如何幫助脆弱度低的國家給予技術需求之評估，並協助建立其國家調適計畫。SBSTA 還希望強化此些國家財務和機制建立，相信透過越多的合作，才越有機會幫助落後國家之運輸基礎設施發展調適減緩措施。
- (5) PMCC 特別在會議期間，宣導國家適當減緩行動 NAMAs(Nationally Appropriate Mitigation Actions)近年來對全球有調適需求國家提供的技

術支援，墨西哥、薩爾瓦多、哥倫比亞、祕魯、突尼西亞、南非、泰國、越南、馬來西亞、印尼、菲律賓，強調 NAMAs 對國家、地方區域、城市的調適策略框架四大範疇的成功(如圖 3.9)，以及分享 NAMAs 經驗下所蒐集的資料庫。



資料來源：Navigating Transport NAMAs, A practical handbook on Nationally Mitigation Actions (NAMAs) in the transport sector, 2nd revised edition。

圖 3.9 NAMAs 調適策略四大範疇

4. 都市運輸連結與可及性

- (1) 加強公共和永續運輸的推動，有助於提升整體運輸經濟環境，並促進較低收入戶的經濟活動能力；步行與自行車只需要低廉的基礎建設，即可帶來巨大的減碳效益。
- (2) INDC 已經讓全球理解交通運輸對減碳之重要性，且不僅僅是減碳效益，尚包括對空氣污染之改善。INDC 將成為新氣候協議的執行機制，並設立全球都市永續發展目標。
- (3) 聯合國秘書處分享關於兩性面對氣候變遷影響在環境、社會、經濟利益的調適工具與方法。不同性別面對氣候變遷脆弱度不同，交通運輸行為模式亦不同，運輸科技需納入性別平等考量，此對運輸連結與可及性功能上係相當重要。
- (4) 低碳成長係存在多方面利益，包括空氣品質、道路安全、交通擁擠的改善。聯合國發展計畫 United Nations Development Programme (UNDP) 提到氣候基金對氣候行動的實質協助，加速永續運輸發展，而低碳城市發展也促進城市經濟成長。
- (5) 私人部門必須加入，因為只靠政府的財務是無法完全達到對開發中國家的支援；另外地方政府也必須加入，因為他們是負責執行運輸減緩策略之前線。

(6) 各國提出城市推動低碳運輸的成功經驗

- a. 在 NAMAs 協助哥倫比亞例子，成功藉由轉乘車站優先提供更多自行車位，加重一般汽車停車費率，減少車輛進入市中心。該計畫預估減少 50%的市區排放。
- b. 奧斯陸甫釋出 2019 年在市中心成立「環保車輛免費區」法令。
- c. 紐約大力發展運具使用行為轉移和電動車隊。
- d. 米蘭在市中心有收取擁擠費計畫，並發展自行車和乘車共享。
- e. 波哥大已建設多處行人道和自行車道設施，並規劃電動公車。
- f. 拉丁美洲：
 - (a) 交通部門占 16%排放量，其中 39%的排放來自於燃油使用，趨勢顯示該地區交通排放量的年均成長率高達 5%，運輸部門有很高的潛力透過大規模的可持續運輸策略減少碳排。
 - (b) 哥倫比亞已開發出低排放發展策略(LEDs)，提出 INDCs 運輸部門 3 項緩解行動：以大眾運輸為導向的開發、貨運、非機動車交通/TDM。
 - (c) 墨西哥、巴西和哥倫比亞已經為運輸創建了國家資金；然而，由於資金仍受限於國家層級，若需對拉丁美洲的個別城市資助永續運輸仍是項挑戰。
 - (d) 巴西創立基金支持太陽能電網電動車、自行車共享和校車。

5. 運輸科技創新與研發

- (1) Technical Examination Committee(ETC)決定加強應對氣候變遷研發科技之融資和支持。此將是開發中國家的運輸部門跟進已開發國家的好機會。The Climate Technology Centre and Network (CTCN)有 100 個會員提供技術支援國家，雖然這裡面僅有不到 10%的交通運輸領域，惟此項決定仍提供運輸部門研發的好機會。
- (2) 法國代表分享巴黎經驗，指出為達成 2030 年減少相較於 1990 水準 40%的減排，占比 25%運輸部門要從多個環節努力。巴黎增加步行和自行車系統，搭配 ITS 技術與交通管理的解決方法，例如共乘和共同辦公室，以及積極推廣電動車，目標在往後 10 年內要達到 80%。

- (3) 印度代表分享在公路、航空、水運與軌道之減碳經驗。印度 Cochin 機場成為全世界第一個用太陽能供電的機場，此外，空運策略還包括機隊更新、引擎改善、營運效率；水運相較於路運，與有極高的能源效率，也應該利用新科技和營運模式擴大其效能；公路運輸部分，新車排放標準於 2014 年開始，提高能源效率與低碳車輛如電動、油電混和車輛的策略正持續執行；軌路運輸作為最經濟的運輸模式，優先從軌道動力著手，以及鐵路電氣化。
- (4) ICAO 聲明 3 項目標：(1)減少溫室氣體排放；(2)減少噪音汙染；(3)將機場對空氣汙染的影響降到最低。ICAO 目標已經有 191 個會員國同意，ICAO 表示要達到這個目標，航空科技的進步和營運模式轉變至為重要，也包括替代燃料的使用，並透過市場機制方式(Market-based Measures, MBMs) 因應全球溫室氣體排放。目前 ICAO 已發展一套針對國際航空排放貿易之 MBM，並有機會透過各國之 INDC 與地區航空合作。

6. 低碳運輸的融資與經濟效益

(1) 全球發展趨勢

- a. 已開發國家對於開發中國家在氣候變遷的財務援助，在 2016 年 70 億美元，2018 年 85 億美元，2020 年達到 100 億美元。其中，11 個國家承諾給予未開發國家資金為 248 百萬美元。世界八大開發銀行證實近 3 年 55 兆美元用於永續運輸投資，並金額將逐步提升至 175 兆美元。
- b. 公部門雖然是運輸融資的主要來源，但私人部門與國際氣候變遷財政將扮演彌補財源的重要角色。因此，需開放更多私人投資，以及增加科技研發之資金。

(2) 資金分配與使用

- a. 各國在永續運輸投資與強化國際氣候變遷財政方面需達成共識。另預估數兆的巨額投資在低碳運輸系統，特別是開發中國家如非洲、亞洲、拉丁美洲。
- b. 拉丁美洲國家在因應氣候變遷的公共運輸投資過低，甚至無編入預算。例如，墨西哥自 2010 年 COP16 以來，該預算被砍了 62%。
- c. 伊斯蘭國家發展銀行總理聲明：「支持會員國家發展有效率的運輸系統，我們將與其他銀行聯盟與合夥者們確保提出創新的解決方案，幫助減少碳排。」。

(3) 石化燃料補助與碳價格措施

- a. 因應氣候變遷資金應不挪至增加使用石化燃料和其他增加碳排之計劃。各國應逐步減少在石化燃料上消耗，此對高度倚賴石化燃料運輸部門創造效益，且成為重新分配運輸資源之契機。
- b. 哥斯大黎加已經開始使用燃料稅，且要將此收入作環境改善與道路建設的用途。
- c. 摩洛哥為首個在 INDC 表示要移除石化燃料補貼，並以天然氣取代之國家。
- d. 瑞士認為全球廢除化石燃料補助是國際合作的基石，他們也正在努力減少短期污染物，減緩污染對氣候和空氣品質的影響。
- e. 世界銀行聯合挪威、瑞典、德國、瑞士成立「Transformative Carbon Asset Facility」組織。以協助開發中國家規劃與執行減緩政策，並使用碳價格機制和其他措施達到氣候減緩目標。
- f. 挪威外交部長指出挪威是全球第一個引進碳價格的國家，並分享碳價格是如何提高挪威的競爭力。

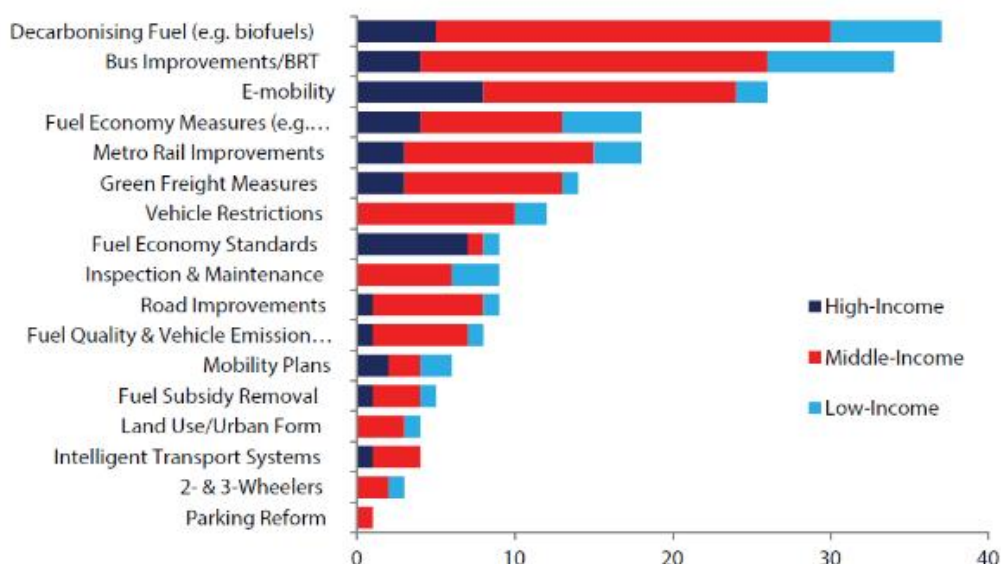
(四) 各國 INDC 於運輸部門之因應作為

INDC 為聯合國氣候變化綱要公約呼籲各國在 2015 年 COP21 會議之前，以國家為範疇，自行按國家自身發展情況與條件，提出各國為因應氣候變遷在 2030 年以前之溫室氣體排放量減量目標，以及因應作為，內容可以包括國家減碳目標與調適策略、推算與計量溫室氣體排放量的方法學、所需要的財政支持、技術發展與轉移、能力建構等。另 INDC 的實踐狀況將反映最新「永續發展目標 (SDGs)」的達成狀況。然而，在 2015 年 11 月 12 日以前，由 160 個國家所提出的 133 份 INDC 的分析報告結果卻指出，INDC 並無法成功達到抑制升溫 2°C 的目標，此同樣適用於運輸部門。

目前可歸責運輸部門之 CO₂ 排放量占全球 23%，並其中全球 40% 國最大能源消耗係在其運輸部門。2012 年全球運輸部門排放 87 億噸 CO₂，運輸部門於 1990-2012 年平均增加率 2%，為碳排放量成長最為迅速部門之一，此代表運輸部門在因應氣候變遷占了關鍵性地位。運輸部門倘無積極的減排政策，2050 年 CO₂ 將到達每年 120 億噸，然而升溫 2°C 的目標下，CO₂ 排放量必須下降至 57 億噸，因此，運輸部門於氣候變遷有相當大減量潛力。IPCC 指出，至 2050 年時運輸部門減少 15%-40% 的 CO₂ 當量是合理預期。UNEP 更估計到 2020 年之間，運輸部門每年貢獻約 30 億噸的減排量。

綜觀各國提交的 INDC 中，有 40% 的國家指出運輸部門占國家總排放第一位，且其餘多數國家的運輸部門也占國家總排放的第二位，提出運輸部門減排措施的國家約占 77%，並有 60% 建議交通部門有具體的改善措施。在有具提運輸部門作為當中，有 88% 的措施都偏向客運，並就客運發展策略上，發展高鐵(2%)與自行車(13%)相對較少被各國提及。另一方面，目前在運輸部門能耗統計上，目前客運約占 60%，而貨運為 40%，但預估貨運量在 2010-2050 年間會提高 350%，這顯示貨運在 INDC 應更加受各國重視。

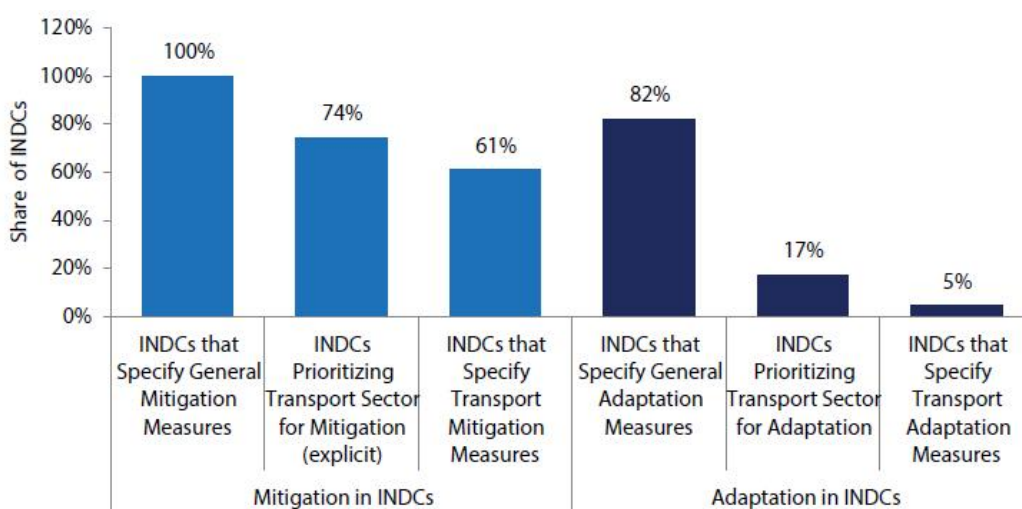
最後將運輸部門相關減排措施做具體分類，並依國家經濟發展進程（國家平均所得）做統計，如圖 3.10。其中，所得較高的已開發國家以運具電氣化、提升燃油效率為主；所得中等的開發中國家以提升軌道與公車服務、車輛檢驗、降低車齡與提高車輛排放標準為主；所得較低的新興國家以公車改善、使用低碳燃料車輛(如生質燃料) 為主。我國自定預期貢獻(INDC) 著重在提升公共運輸市占率(強化軌道與公車服務)，提升車輛能源效率標準(提升燃油效率)，亦推動運具電氣化(電動公車與電動機車)，係為兼具已開發與開發中國家之減量策略。



資料來源：INDCs offer opportunities for ambitious action on transport and climate change, Paris Process on Mobility and Climate, 2015。

圖 3.10 各國 INDC 中運輸部門減排措施分類

除了上述所提運輸部門之具體措施外，各國 INDC 所提相關調適策略中，有論及運輸部門調適策略之討論比例並不高（統計如圖 3.11），按各國所提出的調適措施統計，僅 17%有提到運輸部門之重要性，並其中明確提出運輸部門調適策略之國家更低於 5%（舉例說明如表 3.2）。



資料來源：INDCs offer opportunities for ambitious action on transport and climate change, Paris Process on Mobility and Climate, 2015。

圖 3.11 各國 INDC 調適策略納入運輸部門比例

表 3.3 INDC 中有運輸調適策略的國家與內容

國家	運輸調適策略
孟加拉	優先針對基礎建設實施減緩作為、改善排水系統，已有相關計畫分別由道路與橋梁交通部和水路交通局進行
伯利茲	對交通基礎建設做脆弱度評估，特別是城市地區
甘比亞	改善道路交通網的減緩能力
馬達加斯加	盤點現有或新創立運輸調適策略，包含設立交通基礎設施的防洪標準。
馬爾地夫	針對馬爾地夫的瑚瑚爾島(Hulhule)海岸線進行防衛計畫，以保護島上的機場與碼頭
摩爾多瓦	分析調適方案，包括基礎建設的設計與營運，與面對不確定性的長期決策。

資料來源：INDCs offer opportunities for ambitious action on transport and climate change, Paris Process on Mobility and Climate, 2015。

事實上，運輸部門過去在探討氣候變遷的調適與減緩上，是鮮少被重視與討論。而在 COP21，透過 SLoCat(The Partnership on Sustainable, Low Carbon Transport)組織對調適委員會闡述交通運輸在調適策略中扮演的重要性之後，應有望在 COP21 結束後，受各國更多的支持。

四、法國巴黎運輸系統觀察

於出席 COP21 會議法國巴黎期間，本所出席人員也實地對巴黎城市交通進行觀察，巴黎市雖有良好的公共運輸系統，並且公共運輸、步行和自行車使用興盛，但也受限於城市中心發展早與文化景觀保存的限制，道路系統在尖峰時段壅塞情形，特別是往機場方向。另外，尖峰時段地鐵與郊區鐵路(RER)也是經常客滿，因此，周邊會議時法國代表提及巴黎市仍正在規劃建設環狀快速系統（包含軌道與道路），俾有效解決尖峰運輸需求。

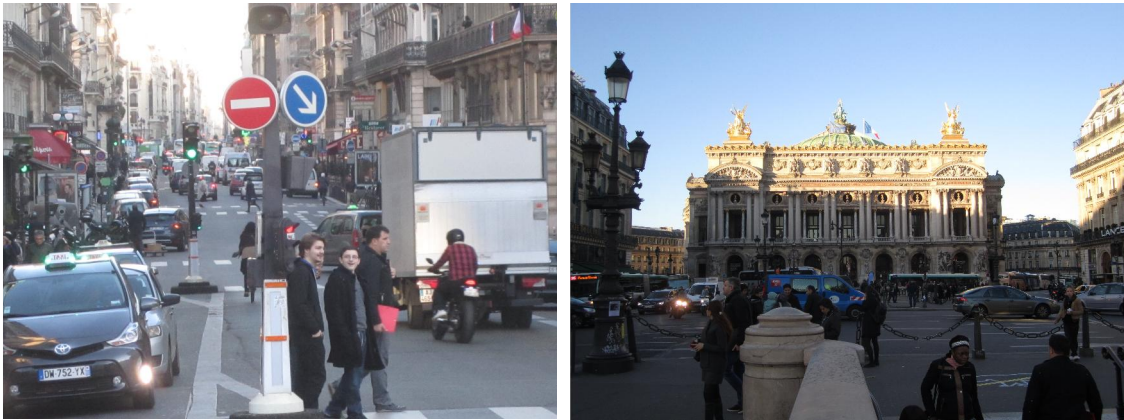


圖 4.1 中午尖峰時段巴黎市區

本節茲針對在巴黎觀察的交通運輸系統，就公共運輸場站、公車與自行車系統、捷運系統、機場巴士、自行車租借系統、電動車充電設施、觀光特色運具、都市景觀提供觀察心得如下。

(一)公共運輸場站

本次會議安排地鐵接駁車於巴黎地鐵 7 號線 Fort d'Aubervilliers，為 7 號線往北方向倒數第二站，已屬於郊區。大會安排的接駁車為油電混合雙節公車，如圖 4.1。另該車站規劃充分發揮了郊區地鐵站停車轉乘理念，提供寬廣空間的公車轉運站，與大空間停車場，停車費率也較市區低，如圖 4.3。此外，公車站以富有藝術感的方式、COP21 接駁區採用廢棄貨櫃的再利用，也令人耳目一新。

(二)公車與自行車系統

巴黎市區係鼓勵公車與自行車，而其公車專用道大致可分為三種：公車專用道、公車+自行車專用道、公車+自行車+計程車專用道；而自行車專用道除了部分可與公車共用外，也有單獨的自行車道。圖 4.4 為巴黎市中心區之公車+自行車專用道使用情形，除了公車與自行車使用外，計程車也可以使用。當自行車單獨在右側行駛時，公車可以直接從左側超越，但自行車若騎乘於專用道中央時，公車會自動慢行，不會按喇叭。

值得一提的是，公車專用道在路口處會以黑白棋盤式區隔，代表公車與自行車仍然在路口享有路權。



圖 4.2 COP21 會議接駁公車



圖 4.3 Fort d'Aubervilliers 地鐵站轉乘設施



圖 4.4 市區公車/自行車專用道使用情形

(三) 捷運系統

巴黎捷運系統具有悠久的歷史，捷運系統內部設施較為老舊，照明設備並不是很足夠，圖 4.5 為巴黎捷運系統相關設施。值得一提，巴黎捷運系統第 1 與第 4 號線現階段已是「全線自動駕駛」，巴黎公共運輸公司 RATP (RATP, Régie Autonome des Transports Parisiens)總裁表示，自動駕駛實施後，已驗證能夠達到節能減碳，未來的巴黎捷運系統，將持續朝向全線自動駕駛的目標前進。此外，巴黎捷運系統車站亦均有提供轉乘公車資訊。

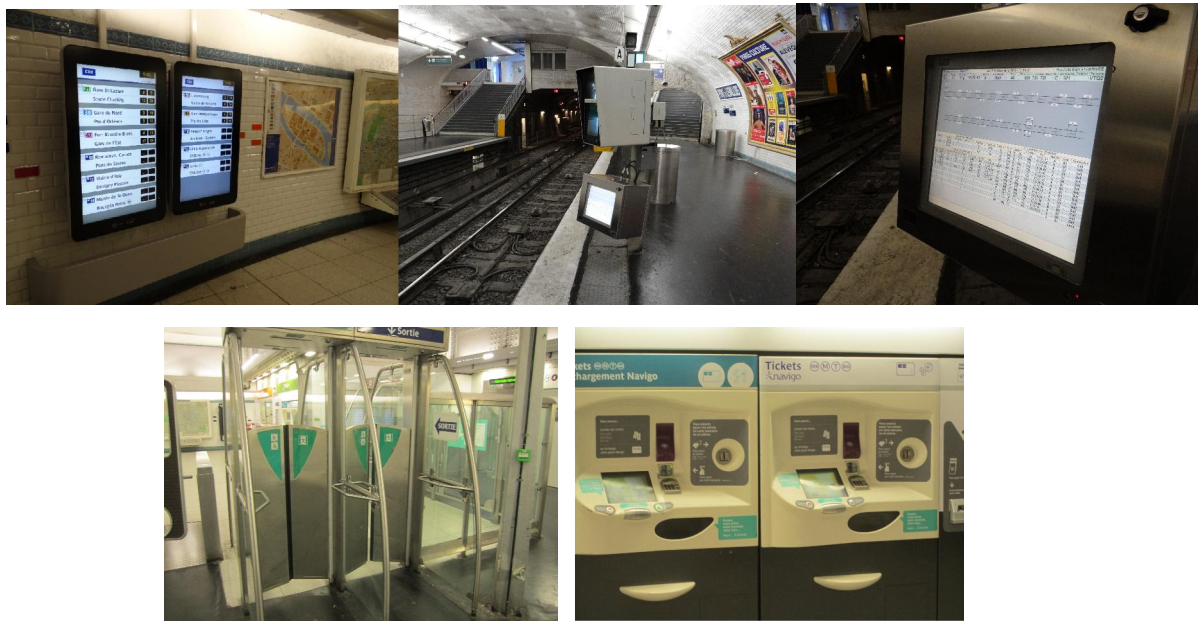


圖 4.5 巴黎捷運站系統相關設施

(四) 機場巴士

巴黎機場巴士名為 RoissyBus(圖 4.6)，各站點採用自動售票機系統，在機場與城市區域內各站點也設置售票機，乘客可直接使用售票機購票，相當方便；此外，售票機系統可直接將交易紀錄回傳至雲端資料庫，對於運輸資料的蒐集也很便利，值得國內借鏡。



圖 4.6 機場巴士 RoissyBus

(五) 自行車租借系統

巴黎市係自行車相當友善地區，市區設置自行車站點分布也很密集，而自行車站的設置多設置在道路路側，少數站點會設置在人行道上，但此情況多屬於廣場類型的站點，並不會特別為了既有車道上私人車輛可行駛的空間，而將自行車往人行道上步設。自行車租借的機器上，有很貼心的放上附近的其他自行車站點位置地圖。



圖 4.7 巴黎自行車租借站

（六）電動車充電設施

目前巴黎市區道路已可看到電動車充電設施，並已提供一般私家車輛使用，圖 4.8 即為巴黎的公共電動車充電設施。另圖 4.9 為 COP21 會場展示商用化電動小客車，經向參展廠商參觀瞭解，商用化電動車於巴黎推動已相當有規模，並且法國政府近年也積極鼓勵民眾購買電動小客車。



圖 4.8 市區電動小客車充電設施



圖 4.9 會場公共電動小客車及充電站

（七）觀光特色運具

全球來訪巴黎市區國際觀光旅客興盛，故配合當地觀光活動，市區除了既有公共運輸系統，另有觀光特色運具如市區提供雙層觀光巴士，並且塞納河畔有船舶載運旅客觀光客環市，參見圖 4.10。

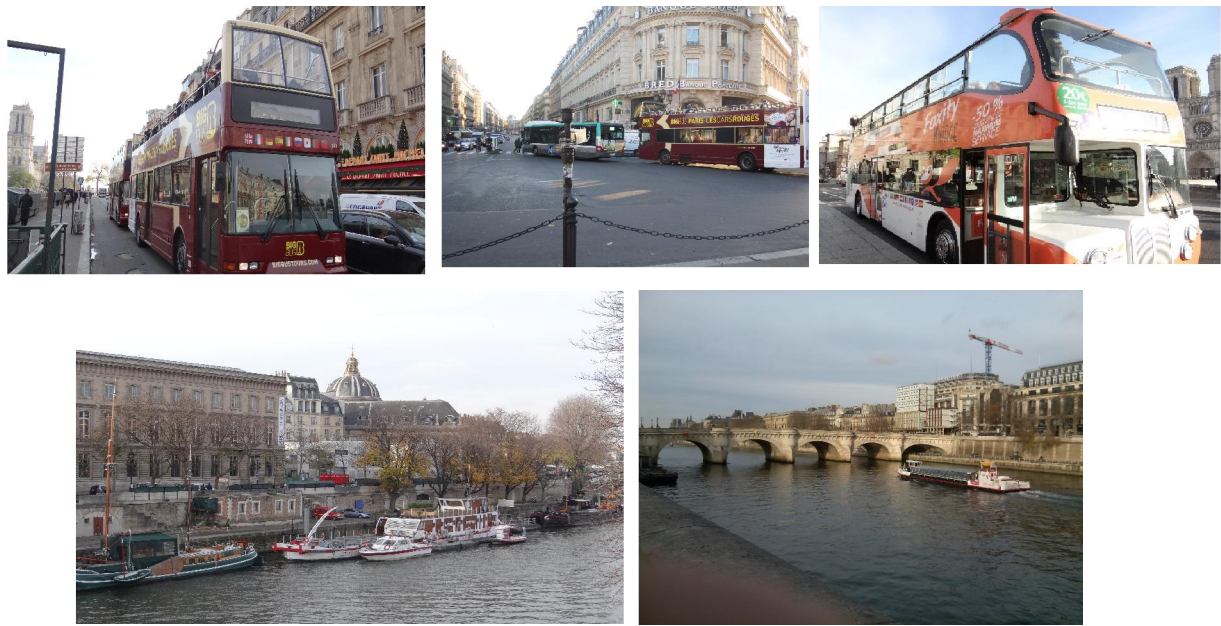


圖 4.10 巴黎的特色運具

(八) 都市景觀

以浪漫藝術著名的巴黎，相當重視其都市景觀(詳圖 4.11)，整體市區建物外觀與道路景觀都有規範嚴格把關，造就市容整齊劃一，整個巴黎市建物風貌都類似同一社區在經營，而此也造就當地觀光產業興盛。



圖 4.11 巴黎市區道路景觀

五、觀察心得與建議

5.1 會議觀察心得

(一)巴黎協定對我國運輸部門之影響

1.我國運輸部門應及早因應「國家自定預期貢獻(INDC)」後續可能之滾動修正事宜。

- (1) 在 2015 年各國陸續遞交的 INDC 分析結果出爐後，各方專家均指出 INDC 仍無法達到抑制升溫 2°C 的目標，《巴黎協定》明確提到抑制升溫的目標將從原來的 2°C 提升到 1.5°C，以警惕全球氣候變化帶來的影響已經刻不容緩，並需要更加強化節能減碳之腳步，此也包涵運輸部門。
- (2) 後續每 5 年各國需提報一次 INDC，而在公約透明的框架機制下，運輸部門至少在 2020 年以前，研提符合各國短期目標之減緩措施，並且中長期目標應也需於 2025 年前有所進展。若要從原來的 2°C 提升到 1.5°C 這個目標，顯然不能等到下一輪 INDC，因此各國代表有共識在 2017 或 2018 年便要針對各國 INDC 進行討論，而我國運輸部門也需及早因應，隨時配合環保署檢討我國 INDC 之準備。
- (3) 《巴黎協定》呼籲各國應開始重視調適對於對抗氣候變化的重要性，調適策略必須納入到國家政策層級中，且各國所提報的 INDC 中也必須納入所謂的 NAP(National Adaptation Plans)，以闡述各國的國家調適計畫，我國運輸部門已配合國發會分工準備相關工作。
- (4) 綜觀各國 INDC 中運輸部門策略，係兼顧國情與不損及交通運輸之正常發展。因應我國運輸部門整體發展取向，我國運輸部門係以提升公共運輸市占率(如強化軌道運輸與公車服務)，提高車輛能源效率標準，以及推動電動公車與電動機車使用為減緩氣候變遷主要因應做法，此與多數國家倡議策略相符，並最適合我國現階段發展進程。
- (5) 目前 INDC 中有 13 個國家提出移除化石燃料補貼的計畫，28 個國家也提出了可能針對稅制做調整的政策方向，對於仰賴化石燃料的運輸部門，如何漸進式減少對化石燃料補貼依賴，係我國運輸部門永續發展之新課題。

2.我國減緩與調適工作需涵蓋民間企業與地方政府共同參與與合作。

- (1) 《巴黎協定》第 13 條內容所提及的透明度框架機制，可期待在未來的幾年之內，透過各國間資訊交流，技術流通會更加順暢。另根據《巴黎協定》第 16 條內容，非締約方利害相關者未來在對抗氣候變遷之國際舞台更有機會嶄露頭角，特別是有規模的民間企業，在對抗氣候變遷扮演關鍵角色，其功能在易於整合政府與學界之力量，且不受國界限制。以運輸部門為例，此種民間企業通常為汽車製造商。尤其在未來低碳車輛發展的趨勢中，需要高水準的技術支援，而眾多新興國家與許多開發中國家需仰賴其協助突破低碳車輛發展之困境。
- (2) 其次，地方政府參與角色也受重視，預計未來全球城市將越來越多，人口也會迅速集中居住都市，但都市可及性也會提高，而運輸需求仍將隨都市發展而增加，但是氣候變遷的影響卻將對都市發展造成巨大影響，我國運輸部門的減緩措施，未來預期在國家減緩措施分工將加重地方政府責任，透過由下而上推動方式從地方、區域到中央之減緩作為，緊密溝通與協調，共同對抗氣候變遷。
- (3) 在調適工作上，《巴黎協定》除了呼籲各國重視調適，也希望各國政府在調適策略上，應透過與地方政府、民間企業等利益關係者作更多溝通與協調的行動。因此，相信此也是運輸部門調適策略研擬上需要強化之過程。

(二)此次 COP21 的正式會議中碳價格雖然未納入協定中，但未來仍不應該低估碳價格議題，因為在 COP21 會議期間的第一天，曾有一場高層級領導會談的周邊會議，會議中法國、墨西哥、德國、智利、加拿大、衣索比亞等國家，以及世界銀行總裁均呼籲儘早提高碳稅金。

(三)最後，就法國巴黎公共運輸之觀察，法國巴黎雖然為歷史悠久之都市，惟在公共運輸系統規劃上，透過特色運具、寬闊人行空間與適應都市紋理之公共運輸規劃，成功調和現代化都市運輸系統與其城市景觀，此使得巴黎之都市與交通運輸系統能兼容多元發展目標。

5.2 會議觀察建議

- (一)因應巴黎協定後各國因應氣候變遷之作為趨勢，建議應積極持續配合我國溫室氣體減量相關工作，並及早有所因應，辦理相關基礎研究規劃，並且藉由跨部會機制(如「行政院綠能低碳推動會」)持續盤點運輸部門相關節能減碳措施，適時依盤點結果修正 INDC 之運輸部門因應作為。
- (二)綜觀各國 INDC，公共運輸推動多為各國低碳運輸最直接之因應策略，特別於公路與軌道運輸推動，爰在配合國家之節能減碳政策趨勢下，我國在公共運輸推動之作為，應列為常態性溫室氣體管考機制之重點工作項目。
- (三)電動車輛已成為國際運輸部門之重要發展趨勢，現階段我國電動車多屬商業示範性質之推廣計畫，數量尚不具規模，並係以電動公車與電動機車為主。電動車輛推動於我國屬跨部會(電動公車：交通部、經濟部、環保署；電動機車：環保署、經濟部與各地方政府)推動工作，爰建議應持續協助相關部會共同完善相關推動工作。
- (四)本次運輸部門相關會議中綠色貨運相當多的討論，而目前我國節能減碳政策多著重公共運輸，對貨物運輸則著墨不多，而由於貨運之 CO₂ 排放約占運輸部門總排放 30%，爰綠色貨運在我國運輸部門相關研究課題需予以重視。另一方面，調適策略在運輸部門之重要性也不斷被強調，並運輸部門調適之範疇已由氣候對基礎設施相關硬性建設影響之討論，趨向機制、風險、賠償與行為軟體之討論，而由此衍生研究課題也是運輸部門調適因應作為重要之研究方向。

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附件 1

行政院組團參加會議代表名單

	單位	職稱	姓名
1	行政院環境保護署	署長	魏國彥
2		參事兼執行秘書	簡慧貞
3		組長	李健育
4		組長	吳奕霖
5		高級環境技術師	王俊勝
6	外交部	副司長	連建辰
7		科長	劉漢清
8		一等秘書	江月琇
9		薦任科員	程瑞安
10		秘書回部	劉博樺
11	駐法國台北代表處	代表	張銘忠
12		副代表	胡正浩
13		秘書	溫啟道
14		秘書	崔巧臨
15		秘書	吳汶靜
16		組長	曾水龍
17		副組長	黃上益
18	駐紐約台北經濟文化辦事處	組長	歐江安
19	駐德國台北代表處	三等秘書	姜予歆
20	駐歐盟兼駐比利時代表處	二等秘書	謝倩菱
21		二等秘書	陳凱馨
22	國家發展委員會	處長	郭翡玉
23		視察	施友元
24	行政院農業委員會	參事	張彬
25	行政院農業委員會林務局	技士	呂志怡
26	經濟部工業局	主任秘書	游振偉
27	衛生福利部	科長	賴麗瑩
28	經濟部能源局	組長	翁素真
29	交通部中央氣象局	主任	程家平
30	交通部運輸研究所	助理研究員	傅強
31	科技部	助理研究員	張美瑜
32	國家災害防救科技中心	副研究員	陳永明
33	國立台灣大學	副教授	邱祈榮
34	國立清華大學	教授	范建得
35		研究助理	方肇頤
36		研究助理	鄭程遠
37	台灣綜合研究院	黃宗煌	副院長
38		蘇漢邦	所長
39		侯仁義	副所長
40	台灣綜合研究院	高助研究員	許婉婷
41	全國工業總會	副召集人	許芳銘
42	中國石油公司	處長	林暘

	單位	職稱	姓名
43	台灣電力公司	資深專業工程師	溫桓正
44	環科顧問公司	組長	黃玠然
45		主任工程師	陳信安
46	鼎漢工程顧問公司	資訊長	周諺鴻
47		規劃師	林大鈞
48	台灣綠色生產力基金會	工程師	廖逸凡
49	中華民國氣象學會	處長	趙恭岳
50	永智顧問公司	總經理	石信智
51	民意傳播顧問公司	新聞助理	廖立潔
52	工業技術研究院	副所長	何無忌
53		組長	蔡振球
54		經理	胡文正
55		資深工程師	盧裕倉
56		資深研究員	呂慶慧
57		研究員	鍾詩明
58		副研究員	李莉鈴
59		工程師	連振安

附件 2

COP21 公約與巴黎協定內容



United Nations

FCCC/CP/2015/L.9/Rev.1



Framework Convention on
Climate Change

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Conference of the Parties

Twenty-first session

Paris, 30 November to 11 December 2015

Agenda item 4(b)

Durban Platform for Enhanced Action (decision 1/CP.17)

**Adoption of a protocol, another legal instrument, or an
agreed outcome with legal force under the Convention
applicable to all Parties**

ADOPTION OF THE PARIS AGREEMENT

Proposal by the President

Draft decision -/CP.21

The Conference of the Parties,

Recalling decision 1/CP.17 on the establishment of the Ad Hoc Working Group on the Durban Platform for Enhanced Action,

Also recalling Articles 2, 3 and 4 of the Convention,

Further recalling relevant decisions of the Conference of the Parties, including decisions 1/CP.16, 2/CP.18, 1/CP.19 and 1/CP.20,

Welcoming the adoption of United Nations General Assembly resolution A/RES/70/1, “Transforming our world: the 2030 Agenda for Sustainable Development”, in particular its goal 13, and the adoption of the Addis Ababa Action Agenda of the third International Conference on Financing for Development and the adoption of the Sendai Framework for Disaster Risk Reduction,

Recognizing that climate change represents an urgent and potentially irreversible threat to human societies and the planet and thus requires the widest possible cooperation by all countries, and their participation in an effective and appropriate international response, with a view to accelerating the reduction of global greenhouse gas emissions,

Also recognizing that deep reductions in global emissions will be required in order to achieve the ultimate objective of the Convention and emphasizing the need for urgency in addressing climate change,

Acknowledging that climate change is a common concern of humankind, Parties should, when taking action to address climate change, respect, promote and consider their respective obligations on human rights, the right to health, the rights of indigenous peoples,

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local communities, migrants, children, persons with disabilities and people in vulnerable situations and the right to development, as well as gender equality, empowerment of women and intergenerational equity,

Also acknowledging the specific needs and concerns of developing country Parties arising from the impact of the implementation of response measures and, in this regard, decisions 5/CP.7, 1/CP.10, 1/CP.16 and 8/CP.17,

Emphasizing with serious concern the urgent need to address the significant gap between the aggregate effect of Parties' mitigation pledges in terms of global annual emissions of greenhouse gases by 2020 and aggregate emission pathways consistent with holding the increase in the global average temperature to well below 2 °C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5 °C above pre-industrial levels,

Also emphasizing that enhanced pre-2020 ambition can lay a solid foundation for enhanced post-2020 ambition,

Stressing the urgency of accelerating the implementation of the Convention and its Kyoto Protocol in order to enhance pre-2020 ambition,

Recognizing the urgent need to enhance the provision of finance, technology and capacity-building support by developed country Parties, in a predictable manner, to enable enhanced pre-2020 action by developing country Parties,

Emphasizing the enduring benefits of ambitious and early action, including major reductions in the cost of future mitigation and adaptation efforts,

Acknowledging the need to promote universal access to sustainable energy in developing countries, in particular in Africa, through the enhanced deployment of renewable energy,

Agreeing to uphold and promote regional and international cooperation in order to mobilize stronger and more ambitious climate action by all Parties and non-Party stakeholders, including civil society, the private sector, financial institutions, cities and other subnational authorities, local communities and indigenous peoples,

I. ADOPTION

1. *Decides* to adopt the Paris Agreement under the United Nations Framework Convention on Climate Change (hereinafter referred to as "the Agreement") as contained in the annex;
2. *Requests* the Secretary-General of the United Nations to be the Depositary of the Agreement and to have it open for signature in New York, United States of America, from 22 April 2016 to 21 April 2017;
3. *Invites* the Secretary-General to convene a high-level signature ceremony for the Agreement on 22 April 2016;
4. *Also invites* all Parties to the Convention to sign the Agreement at the ceremony to be convened by the Secretary-General, or at their earliest opportunity, and to deposit their respective instruments of ratification, acceptance, approval or accession, where appropriate, as soon as possible;
5. *Recognizes* that Parties to the Convention may provisionally apply all of the provisions of the Agreement pending its entry into force, and *requests* Parties to provide notification of any such provisional application to the Depositary;

6. *Notes* that the work of the Ad Hoc Working Group on the Durban Platform for Enhanced Action, in accordance with decision 1/CP.17, paragraph 4, has been completed;
7. *Decides* to establish the Ad Hoc Working Group on the Paris Agreement under the same arrangement, mutatis mutandis, as those concerning the election of officers to the Bureau of the Ad Hoc Working Group on the Durban Platform for Enhanced Action;¹
8. *Also decides* that the Ad Hoc Working Group on the Paris Agreement shall prepare for the entry into force of the Agreement and for the convening of the first session of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement;
9. *Further decides* to oversee the implementation of the work programme resulting from the relevant requests contained in this decision;
10. *Requests* the Ad Hoc Working Group on the Paris Agreement to report regularly to the Conference of the Parties on the progress of its work and to complete its work by the first session of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement;
11. *Decides* that the Ad Hoc Working Group on the Paris Agreement shall hold its sessions starting in 2016 in conjunction with the sessions of the Convention subsidiary bodies and shall prepare draft decisions to be recommended through the Conference of the Parties to the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement for consideration and adoption at its first session;

II. INTENDED NATIONALLY DETERMINED CONTRIBUTIONS

12. *Welcomes* the intended nationally determined contributions that have been communicated by Parties in accordance with decision 1/CP.19, paragraph 2(b);
13. *Reiterates* its invitation to all Parties that have not yet done so to communicate to the secretariat their intended nationally determined contributions towards achieving the objective of the Convention as set out in its Article 2 as soon as possible and well in advance of the twenty-second session of the Conference of the Parties (November 2016) and in a manner that facilitates the clarity, transparency and understanding of the intended nationally determined contributions;
14. *Requests* the secretariat to continue to publish the intended nationally determined contributions communicated by Parties on the UNFCCC website;
15. *Reiterates* its call to developed country Parties, the operating entities of the Financial Mechanism and any other organizations in a position to do so to provide support for the preparation and communication of the intended nationally determined contributions of Parties that may need such support;
16. *Takes note* of the synthesis report on the aggregate effect of intended nationally determined contributions communicated by Parties by 1 October 2015, contained in document FCCC/CP/2015/7;
17. *Notes* with concern that the estimated aggregate greenhouse gas emission levels in 2025 and 2030 resulting from the intended nationally determined contributions do not fall within least-cost 2 °C scenarios but rather lead to a projected level of 55 gigatonnes in 2030, and *also notes* that much greater emission reduction efforts will be required than those associated with the intended nationally determined contributions in order to hold the increase in the global average temperature to below 2 °C above pre-industrial levels by

¹ Endorsed by decision 2/CP.18, paragraph 2.

reducing emissions to 40 gigatonnes or to 1.5 °C above pre-industrial levels by reducing to a level to be identified in the special report referred to in paragraph 21 below;

18. *Also notes, in this context*, the adaptation needs expressed by many developing country Parties in their intended nationally determined contributions;

19. *Requests* the secretariat to update the synthesis report referred to in paragraph 16 above so as to cover all the information in the intended nationally determined contributions communicated by Parties pursuant to decision 1/CP.20 by 4 April 2016 and to make it available by 2 May 2016;

20. *Decides* to convene a facilitative dialogue among Parties in 2018 to take stock of the collective efforts of Parties in relation to progress towards the long-term goal referred to in Article 4, paragraph 1, of the Agreement and to inform the preparation of nationally determined contributions pursuant to Article 4, paragraph 8, of the Agreement;

21. *Invites* the Intergovernmental Panel on Climate Change to provide a special report in 2018 on the impacts of global warming of 1.5 °C above pre-industrial levels and related global greenhouse gas emission pathways;

III. DECISIONS TO GIVE EFFECT TO THE AGREEMENT

MITIGATION

22. *Invites* Parties to communicate their first nationally determined contribution no later than when the Party submits its respective instrument of ratification, accession, or approval of the Paris Agreement. If a Party has communicated an intended nationally determined contribution prior to joining the Agreement, that Party shall be considered to have satisfied this provision unless that Party decides otherwise;

23. *Urges* those Parties whose intended nationally determined contribution pursuant to decision 1/CP.20 contains a time frame up to 2025 to communicate by 2020 a new nationally determined contribution and to do so every five years thereafter pursuant to Article 4, paragraph 9, of the Agreement;

24. *Requests* those Parties whose intended nationally determined contribution pursuant to decision 1/CP.20 contains a time frame up to 2030 to communicate or update by 2020 these contributions and to do so every five years thereafter pursuant to Article 4, paragraph 9, of the Agreement;

25. *Decides* that Parties shall submit to the secretariat their nationally determined contributions referred to in Article 4 of the Agreement at least 9 to 12 months in advance of the relevant meeting of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement with a view to facilitating the clarity, transparency and understanding of these contributions, including through a synthesis report prepared by the secretariat;

26. *Requests* the Ad Hoc Working Group on the Paris Agreement to develop further guidance on features of the nationally determined contributions for consideration and adoption by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its first session;

27. *Agrees* that the information to be provided by Parties communicating their nationally determined contributions, in order to facilitate clarity, transparency and understanding, may include, as appropriate, inter alia, quantifiable information on the reference point (including, as appropriate, a base year), time frames and/or periods for implementation, scope and coverage, planning processes, assumptions and methodological approaches including those for estimating and accounting for anthropogenic greenhouse gas

emissions and, as appropriate, removals, and how the Party considers that its nationally determined contribution is fair and ambitious, in the light of its national circumstances, and how it contributes towards achieving the objective of the Convention as set out in its Article 2;

28. *Requests* the Ad Hoc Working Group on the Paris Agreement to develop further guidance for the information to be provided by Parties in order to facilitate clarity, transparency and understanding of nationally determined contributions for consideration and adoption by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its first session;

29. *Also requests* the Subsidiary Body for Implementation to develop modalities and procedures for the operation and use of the public registry referred to in Article 4, paragraph 12, of the Agreement, for consideration and adoption by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its first session;

30. *Further requests* the secretariat to make available an interim public registry in the first half of 2016 for the recording of nationally determined contributions submitted in accordance with Article 4 of the Agreement, pending the adoption by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement of the modalities and procedures referred to in paragraph 29 above;

31. *Requests* the Ad Hoc Working Group on the Paris Agreement to elaborate, drawing from approaches established under the Convention and its related legal instruments as appropriate, guidance for accounting for Parties' nationally determined contributions, as referred to in Article 4, paragraph 13, of the Agreement, for consideration and adoption by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its first session, which ensures that:

(a) Parties account for anthropogenic emissions and removals in accordance with methodologies and common metrics assessed by the Intergovernmental Panel on Climate Change and adopted by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement;

(b) Parties ensure methodological consistency, including on baselines, between the communication and implementation of nationally determined contributions;

(c) Parties strive to include all categories of anthropogenic emissions or removals in their nationally determined contributions and, once a source, sink or activity is included, continue to include it;

(d) Parties shall provide an explanation of why any categories of anthropogenic emissions or removals are excluded;

32. *Decides* that Parties shall apply the guidance mentioned in paragraph 31 above to the second and subsequent nationally determined contributions and that Parties may elect to apply such guidance to their first nationally determined contribution;

33. *Also decides* that the Forum on the Impact of the Implementation of response measures, under the subsidiary bodies, shall continue, and shall serve the Agreement;

34. *Further decides* that the Subsidiary Body for Scientific and Technological Advice and the Subsidiary Body for Implementation shall recommend, for consideration and adoption by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its first session, the modalities, work programme and functions of the Forum on the Impact of the Implementation of response measures to address the effects of the implementation of response measures under the Agreement by enhancing cooperation amongst Parties on understanding the impacts of mitigation actions under the Agreement

and the exchange of information, experiences, and best practices amongst Parties to raise their resilience to these impacts;*

36. *Invites* Parties to communicate, by 2020, to the secretariat mid-century, long-term low greenhouse gas emission development strategies in accordance with Article 4, paragraph 19, of the Agreement, and *requests* the secretariat to publish on the UNFCCC website Parties' low greenhouse gas emission development strategies as communicated;

37. *Requests* the Subsidiary Body for Scientific and Technological Advice to develop and recommend the guidance referred to under Article 6, paragraph 2, of the Agreement for adoption by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its first session, including guidance to ensure that double counting is avoided on the basis of a corresponding adjustment by Parties for both anthropogenic emissions by sources and removals by sinks covered by their nationally determined contributions under the Agreement;

38. *Recommends* that the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement adopt rules, modalities and procedures for the mechanism established by Article 6, paragraph 4, of the Agreement on the basis of:

- (a) Voluntary participation authorized by each Party involved;
- (b) Real, measurable, and long-term benefits related to the mitigation of climate change;
- (c) Specific scopes of activities;
- (d) Reductions in emissions that are additional to any that would otherwise occur;
- (e) Verification and certification of emission reductions resulting from mitigation activities by designated operational entities;
- (f) Experience gained with and lessons learned from existing mechanisms and approaches adopted under the Convention and its related legal instruments;

39. *Requests* the Subsidiary Body for Scientific and Technological Advice to develop and recommend rules, modalities and procedures for the mechanism referred to in paragraph 38 above for consideration and adoption by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its first session;

40. *Also requests* the Subsidiary Body for Scientific and Technological Advice to undertake a work programme under the framework for non-market approaches to sustainable development referred to in Article 6, paragraph 8, of the Agreement, with the objective of considering how to enhance linkages and create synergy between, inter alia, mitigation, adaptation, finance, technology transfer and capacity-building, and how to facilitate the implementation and coordination of non-market approaches;

41. *Further requests* the Subsidiary Body for Scientific and Technological Advice to recommend a draft decision on the work programme referred to in paragraph 40 above, taking into account the views of Parties, for consideration and adoption by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its first session;

ADAPTATION

* Paragraph 35 has been deleted, and subsequent paragraph numbering and cross references to other paragraphs within the document will be amended at a later stage.

42. *Requests* the Adaptation Committee and the Least Developed Countries Expert Group to jointly develop modalities to recognize the adaptation efforts of developing country Parties, as referred to in Article 7, paragraph 3, of the Agreement, and make recommendations for consideration and adoption by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its first session;

43. *Also requests* the Adaptation Committee, taking into account its mandate and its second three-year workplan, and with a view to preparing recommendations for consideration and adoption by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its first session:

(a) To review, in 2017, the work of adaptation-related institutional arrangements under the Convention, with a view to identifying ways to enhance the coherence of their work, as appropriate, in order to respond adequately to the needs of Parties;

(b) To consider methodologies for assessing adaptation needs with a view to assisting developing countries, without placing an undue burden on them;

44. *Invites* all relevant United Nations agencies and international, regional and national financial institutions to provide information to Parties through the secretariat on how their development assistance and climate finance programmes incorporate climate-proofing and climate resilience measures;

45. *Requests* Parties to strengthen regional cooperation on adaptation where appropriate and, where necessary, establish regional centres and networks, in particular in developing countries, taking into account decision 1/CP.16, paragraph 13;

46. *Also requests* the Adaptation Committee and the Least Developed Countries Expert Group, in collaboration with the Standing Committee on Finance and other relevant institutions, to develop methodologies, and make recommendations for consideration and adoption by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its first session on:

(a) Taking the necessary steps to facilitate the mobilization of support for adaptation in developing countries in the context of the limit to global average temperature increase referred to in Article 2 of the Agreement;

(b) Reviewing the adequacy and effectiveness of adaptation and support referred to in Article 7, paragraph 14(c), of the Agreement;

47. *Further requests* the Green Climate Fund to expedite support for the least developed countries and other developing country Parties for the formulation of national adaptation plans, consistent with decisions 1/CP.16 and 5/CP.17, and for the subsequent implementation of policies, projects and programmes identified by them;

LOSS AND DAMAGE

48. *Decides* on the continuation of the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts, following the review in 2016;

49. *Requests* the Executive Committee of the Warsaw International Mechanism to establish a clearinghouse for risk transfer that serves as a repository for information on insurance and risk transfer, in order to facilitate the efforts of Parties to develop and implement comprehensive risk management strategies;

50. *Also requests* the Executive Committee of the Warsaw International Mechanism to establish, according to its procedures and mandate, a task force to complement, draw upon the work of and involve, as appropriate, existing bodies and expert groups under the Convention including the Adaptation Committee and the Least Developed Countries Expert Group, as well as relevant organizations and expert bodies outside the Convention, to

develop recommendations for integrated approaches to avert, minimize and address displacement related to the adverse impacts of climate change;

51. *Further requests* the Executive Committee of the Warsaw International Mechanism to initiate its work, at its next meeting, to operationalize the provisions referred to in paragraphs 49 and 50 above, and to report on progress thereon in its annual report;

52. *Agrees* that Article 8 of the Agreement does not involve or provide a basis for any liability or compensation;

FINANCE

53. *Decides* that, in the implementation of the Agreement, financial resources provided to developing countries should enhance the implementation of their policies, strategies, regulations and action plans and their climate change actions with respect to both mitigation and adaptation to contribute to the achievement of the purpose of the Agreement as defined in Article 2;

54. *Also decides* that, in accordance with Article 9, paragraph 3, of the Agreement, developed countries intend to continue their existing collective mobilization goal through 2025 in the context of meaningful mitigation actions and transparency on implementation; prior to 2025 the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement shall set a new collective quantified goal from a floor of USD 100 billion per year, taking into account the needs and priorities of developing countries;

55. *Recognizes* the importance of adequate and predictable financial resources, including for results-based payments, as appropriate, for the implementation of policy approaches and positive incentives for reducing emissions from deforestation and forest degradation, and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks; as well as alternative policy approaches, such as joint mitigation and adaptation approaches for the integral and sustainable management of forests; while reaffirming the importance of non-carbon benefits associated with such approaches; encouraging the coordination of support from, inter alia, public and private, bilateral and multilateral sources, such as the Green Climate Fund, and alternative sources in accordance with relevant decisions by the Conference of the Parties;

56. *Decides* to initiate, at its twenty-second session, a process to identify the information to be provided by Parties, in accordance with Article 9, paragraph 5, of the Agreement with the view to providing a recommendation for consideration and adoption by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its first session;

57. *Also decides* to ensure that the provision of information in accordance with Article 9, paragraph 7 of the Agreement shall be undertaken in accordance with modalities, procedures and guidelines referred to in paragraph 96 below;

58. *Requests* Subsidiary Body for Scientific and Technological Advice to develop modalities for the accounting of financial resources provided and mobilized through public interventions in accordance with Article 9, paragraph 7, of the Agreement for consideration by the Conference of the Parties at its twenty-fourth session (November 2018), with the view to making a recommendation for consideration and adoption by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its first session;

59. *Decides* that the Green Climate Fund and the Global Environment Facility, the entities entrusted with the operation of the Financial Mechanism of the Convention, as well as the Least Developed Countries Fund and the Special Climate Change Fund, administered by the Global Environment Facility, shall serve the Agreement;

60. *Recognizes* that the Adaptation Fund may serve the Agreement, subject to relevant decisions by the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol and the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement;
61. *Invites* the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol to consider the issue referred to in paragraph 60 above and make a recommendation to the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its first session;
62. *Recommends* that the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement shall provide guidance to the entities entrusted with the operation of the Financial Mechanism of the Convention on the policies, programme priorities and eligibility criteria related to the Agreement for transmission by the Conference of the Parties;
63. *Decides* that the guidance to the entities entrusted with the operations of the Financial Mechanism of the Convention in relevant decisions of the Conference of the Parties, including those agreed before adoption of the Agreement, shall apply *mutatis mutandis*;
64. *Also decides* that the Standing Committee on Finance shall serve the Agreement in line with its functions and responsibilities established under the Conference of the Parties;
65. *Urges* the institutions serving the Agreement to enhance the coordination and delivery of resources to support country-driven strategies through simplified and efficient application and approval procedures, and through continued readiness support to developing country Parties, including the least developed countries and small island developing States, as appropriate;

TECHNOLOGY DEVELOPMENT AND TRANSFER

66. *Takes note of* the interim report of the Technology Executive Committee on guidance on enhanced implementation of the results of technology needs assessments as referred to in document FCCC/SB/2015/INF.3;
67. *Decides* to strengthen the Technology Mechanism and requests the Technology Executive Committee and the Climate Technology Centre and Network, in supporting the implementation of the Agreement, to undertake further work relating to, *inter alia*:
- (a) Technology research, development and demonstration;
 - (b) The development and enhancement of endogenous capacities and technologies;
68. *Requests* the Subsidiary Body for Scientific and Technological Advice to initiate, at its forty-fourth session (May 2016), the elaboration of the technology framework established under Article 10, paragraph 4, of the Agreement and to report on its findings to the Conference of the Parties, with a view to the Conference of the Parties making a recommendation on the framework to the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement for consideration and adoption at its first session, taking into consideration that the framework should facilitate, *inter alia*:
- (a) The undertaking and updating of technology needs assessments, as well as the *enhanced* implementation of their results, particularly technology action plans and project ideas, through the preparation of bankable projects;
 - (b) The provision of enhanced financial and technical support for the implementation of the results of the technology needs assessments;

- (c) The assessment of technologies that are ready for transfer;
- (d) The enhancement of enabling environments for and the addressing of barriers to the development and transfer of socially and environmentally sound technologies;

69. *Decides* that the Technology Executive Committee and the Climate Technology Centre and Network shall report to the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement, through the subsidiary bodies, on their activities to support the implementation of the Agreement;

70. *Also decides* to undertake a periodic assessment of the effectiveness of and the adequacy of the support provided to the Technology Mechanism in supporting the implementation of the Agreement on matters relating to technology development and transfer;

71. *Requests* the Subsidiary Body for Implementation to initiate, at its forty-fourth session, the elaboration of the scope of and modalities for the periodic assessment referred to in paragraph 70 above, taking into account the review of the Climate Technology Centre and Network as referred to in decision 2/CP.17, annex VII, paragraph 20 and the modalities for the global stocktake referred to in Article 14 of the Agreement, for consideration and adoption by the Conference of the Parties at its twenty-fifth session (November 2019);

CAPACITY-BUILDING

72. *Decides* to establish the Paris Committee on Capacity-building whose aim will be to address gaps and needs, both current and emerging, in implementing capacity-building in developing country Parties and further enhancing capacity-building efforts, including with regard to coherence and coordination in capacity-building activities under the Convention;

73. *Also decides* that the Paris Committee on Capacity-building will manage and oversee the work plan mentioned in paragraph 74 below;

74. *Further decides* to launch a work plan for the period 2016–2020 with the following activities:

- (a) Assessing how to increase synergies through cooperation and avoid duplication among existing bodies established under the Convention that implement capacity-building activities, including through collaborating with institutions under and outside the Convention;

- (b) Identifying capacity gaps and needs and recommending ways to address them;

- (c) Promoting the development and dissemination of tools and methodologies for the implementation of capacity-building;

- (d) Fostering global, regional, national and subnational cooperation;

- (e) Identifying and collecting good practices, challenges, experiences, and lessons learned from work on capacity-building by bodies established under the Convention;

- (f) Exploring how developing country Parties can take ownership of building and maintaining capacity over time and space;

- (g) Identifying opportunities to strengthen capacity at the national, regional, and subnational level;

- (h) Fostering dialogue, coordination, collaboration and coherence among relevant processes and initiatives under the Convention, including through exchanging

information on capacity-building activities and strategies of bodies established under the Convention;

(i) Providing guidance to the secretariat on the maintenance and further development of the web-based capacity-building portal;

75. *Decides* that the Paris Committee on Capacity-building will annually focus on an area or theme related to enhanced technical exchange on capacity-building, with the purpose of maintaining up-to-date knowledge on the successes and challenges in building capacity effectively in a particular area;

76. *Requests* the Subsidiary Body for Implementation to organize annual in-session meetings of the Paris Committee on Capacity-building;

77. *Also requests* the Subsidiary Body for Implementation to develop the terms of reference for the Paris Committee on Capacity-building, in the context of the third comprehensive review of the implementation of the capacity-building framework, also taking into account paragraphs 75, 76, 77 and 78 above and paragraphs 82 and 83 below, with a view to recommending a draft decision on this matter for consideration and adoption by the Conference of the Parties at its twenty-second session;

78. *Invites* Parties to submit their views on the membership of the Paris Committee on Capacity-building by 9 March 2016;²

79. *Requests* the secretariat to compile the submissions referred to in paragraph 78 above into a miscellaneous document for consideration by the Subsidiary Body for Implementation at its forty-fourth session;

80. *Decides* that the inputs to the Paris Committee on Capacity-building will include, inter alia, submissions, the outcome of the third comprehensive review of the implementation of the capacity-building framework, the secretariat's annual synthesis report on the implementation of the framework for capacity-building in developing countries, the secretariat's compilation and synthesis report on capacity-building work of bodies established under the Convention and its Kyoto Protocol, and reports on the Durban Forum and the capacity-building portal;

81. *Requests* the Paris Committee on Capacity-building to prepare annual technical progress reports on its work, and to make these reports available at the sessions of the Subsidiary Body for Implementation coinciding with the sessions of the Conference of the Parties;

82. *Also requests* the Conference of the Parties at its twenty-fifth session (November 2019), to review the progress, need for extension, the effectiveness and enhancement of the Paris Committee on Capacity-building and to take any action it considers appropriate, with a view to making recommendations to the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its first session on enhancing institutional arrangements for capacity-building consistent with Article 11, paragraph 5, of the Agreement;

83. *Calls upon* all Parties to ensure that education, training and public awareness, as reflected in Article 6 of the Convention and in Article 12 of the Agreement are adequately considered in their contribution to capacity-building;

84. *Invites* the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its first session to explore ways of enhancing the implementation of

² Parties should submit their views via the submissions portal at <<http://www.unfccc.int/5900>>.

training, public awareness, public participation and public access to information so as to enhance actions under the Agreement;

TRANSPARENCY OF ACTION AND SUPPORT

85. *Decides* to establish a Capacity-building Initiative for Transparency in order to build institutional and technical capacity, both pre- and post-2020. This initiative will support developing country Parties, upon request, in meeting enhanced transparency requirements as defined in Article 13 of the Agreement in a timely manner;

86. *Also decides* that the Capacity-building Initiative for Transparency will aim:

(a) To strengthen national institutions for transparency-related activities in line with national priorities;

(b) To provide relevant tools, training and assistance for meeting the provisions stipulated in Article 13 of the Agreement;

(c) To assist in the improvement of transparency over time;

87. *Urges and requests* the Global Environment Facility to make arrangements to support the establishment and operation of the Capacity-building Initiative for Transparency as a priority reporting-related need, including through voluntary contributions to support developing countries in the sixth replenishment of the Global Environment Facility and future replenishment cycles, to complement existing support under the Global Environment Facility;

88. *Decides* to assess the implementation of the Capacity-building Initiative for Transparency in the context of the seventh review of the financial mechanism;

89. *Requests* that the Global Environment Facility, as an operating entity of the financial mechanism include in its annual report to the Conference of the Parties the progress of work in the design, development and implementation of the Capacity-building Initiative for Transparency referred to in paragraph 85 above starting in 2016;

90. *Decides* that, in accordance with Article 13, paragraph 2, of the Agreement, developing countries shall be provided flexibility in the implementation of the provisions of that Article, including in the scope, frequency and level of detail of reporting, and in the scope of review, and that the scope of review could provide for in-country reviews to be optional, while such flexibilities shall be reflected in the development of modalities, procedures and guidelines referred to in paragraph 92 below;

91. *Also decides* that all Parties, except for the least developed country Parties and small island developing States, shall submit the information referred to in Article 13, paragraphs 7, 8, 9 and 10, as appropriate, no less frequently than on a biennial basis, and that the least developed country Parties and small island developing States may submit this information at their discretion;

92. *Requests* the Ad Hoc Working Group on the Paris Agreement to develop recommendations for modalities, procedures and guidelines in accordance with Article 13, paragraph 13, of the Agreement, and to define the year of their first and subsequent review and update, as appropriate, at regular intervals, for consideration by the Conference of the Parties, at its twenty-fourth session, with a view to forwarding them to the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement for adoption at its first session;

93. *Also requests* the Ad Hoc Working Group on the Paris Agreement in developing the recommendations for the modalities, procedures and guidelines referred to in paragraph 92 above to take into account, inter alia:

- (a) The importance of facilitating improved reporting and transparency over time;
- (b) The need to provide flexibility to those developing country Parties that need it in the light of their capacities;
- (c) The need to promote transparency, accuracy, completeness, consistency, and comparability;
- (d) The need to avoid duplication as well as undue burden on Parties and the secretariat;
- (e) The need to ensure that Parties maintain at least the frequency and quality of reporting in accordance with their respective obligations under the Convention;
- (f) The need to ensure that double counting is avoided;
- (g) The need to ensure environmental integrity;

94. *Further requests* the Ad Hoc Working Group on the Paris Agreement, when developing the modalities, procedures and guidelines referred to in paragraph 92 above, to draw on the experiences from and take into account other on-going relevant processes under the Convention;

95. *Requests* the Ad Hoc Working Group on the Paris Agreement, when developing modalities, procedures and guidelines referred to in paragraph 92 above, to consider, inter alia:

- (a) The types of flexibility available to those developing countries that need it on the basis of their capacities;
- (b) The consistency between the methodology communicated in the nationally determined contribution and the methodology for reporting on progress made towards achieving individual Parties' respective nationally determined contribution;
- (c) That Parties report information on adaptation action and planning including, if appropriate, their national adaptation plans, with a view to collectively exchanging information and sharing lessons learned;
- (d) Support provided, enhancing delivery of support for both adaptation and mitigation through, inter alia, the common tabular formats for reporting support, and taking into account issues considered by the Subsidiary Body for Scientific and Technological Advice on methodologies for reporting on financial information, and enhancing the reporting by developing countries on support received, including the use, impact and estimated results thereof;
- (e) Information in the biennial assessments and other reports of the Standing Committee on Finance and other relevant bodies under the Convention;
- (f) Information on the social and economic impact of response measures;

96. *Also requests* the Ad Hoc Working Group on the Paris Agreement, when developing recommendations for modalities, procedures and guidelines referred to in paragraph 92 above, to enhance the transparency of support provided in accordance with Article 9 of the Agreement;

97. *Further requests* the Ad Hoc Working Group on the Paris Agreement to report on the progress of work on the modalities, procedures and guidelines referred to in paragraph

92 above to future sessions of the Conference of the Parties, and that this work be concluded no later than 2018;

98. *Decides* that the modalities, procedures and guidelines developed under paragraph 92 above, shall be applied upon the entry into force of the Paris Agreement;

99. *Also decides* that the modalities, procedures and guidelines of this transparency framework shall build upon and eventually supersede the measurement, reporting and verification system established by decision 1/CP.16, paragraphs 40 to 47 and 60 to 64, and decision 2/CP.17, paragraphs 12 to 62, immediately following the submission of the final biennial reports and biennial update reports;

GLOBAL STOCKTAKE

100. *Requests* the Ad Hoc Working Group on the Paris Agreement to identify the sources of input for the global stocktake referred to in Article 14 of the Agreement and to report to the Conference of the Parties, with a view to the Conference of the Parties making a recommendation to the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement for consideration and adoption at its first session, including, but not limited to:

- (a) Information on:
 - (i) The overall effect of the nationally determined contributions communicated by Parties;
 - (ii) The state of adaptation efforts, support, experiences and priorities from the communications referred to in Article 7, paragraphs 10 and 11, of the Agreement, and reports referred to in Article 13, paragraph 7, of the Agreement;
 - (iii) The mobilization and provision of support;
- (b) The latest reports of the Intergovernmental Panel on Climate Change;
- (c) Reports of the subsidiary bodies;

101. *Also requests* the Subsidiary Body for Scientific and Technological Advice to provide advice on how the assessments of the Intergovernmental Panel on Climate Change can inform the global stocktake of the implementation of the Agreement pursuant to its Article 14 of the Agreement and to report on this matter to the Ad Hoc Working Group on the Paris Agreement at its second session;

102. *Further requests* the Ad Hoc Working Group on the Paris Agreement to develop modalities for the global stocktake referred to in Article 14 of the Agreement and to report to the Conference of the Parties, with a view to making a recommendation to the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement for consideration and adoption at its first session;

FACILITATING IMPLEMENTATION AND COMPLIANCE

103. *Decides* that the committee referred to in Article 15, paragraph 2, of the Agreement shall consist of 12 members with recognized competence in relevant scientific, technical, socio-economic or legal fields, to be elected by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement on the basis of equitable geographical representation, with two members each from the five regional groups of the United Nations and one member each from the small island developing States and the least developed countries, while taking into account the goal of gender balance;

104. *Requests* the Ad Hoc Working Group on the Paris Agreement to develop the modalities and procedures for the effective operation of the committee referred to in Article 15, paragraph 2, of the Agreement, with a view to the Ad Hoc Working Group on the Paris

Agreement completing its work on such modalities and procedures for consideration and adoption by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its first session;

FINAL CLAUSES

105. *Also requests* the secretariat, solely for the purposes of Article 21 of the Agreement, to make available on its website on the date of adoption of the Agreement as well as in the report of the Conference of the Parties at its twenty-first session, information on the most up-to-date total and per cent of greenhouse gas emissions communicated by Parties to the Convention in their national communications, greenhouse gas inventory reports, biennial reports or biennial update reports;

IV. ENHANCED ACTION PRIOR TO 2020

106. *Resolves* to ensure the highest possible mitigation efforts in the pre-2020 period, including by:

(a) Urging all Parties to the Kyoto Protocol that have not already done so to ratify and implement the Doha Amendment to the Kyoto Protocol;

(b) Urging all Parties that have not already done so to make and implement a mitigation pledge under the Cancun Agreements;

(c) Reiterating its resolve, as set out in decision 1/CP.19, paragraphs 3 and 4, to accelerate the full implementation of the decisions constituting the agreed outcome pursuant to decision 1/CP.13 and enhance ambition in the pre-2020 period in order to ensure the highest possible mitigation efforts under the Convention by all Parties;

(d) Inviting developing country Parties that have not submitted their first biennial update reports to do so as soon as possible;

(e) Urging all Parties to participate in the existing measurement, reporting and verification processes under the Cancun Agreements, in a timely manner, with a view to demonstrating progress made in the implementation of their mitigation pledges;

107. *Encourages* Parties to promote the voluntary cancellation by Party and non-Party stakeholders, without double counting of units issued under the Kyoto Protocol, including certified emission reductions that are valid for the second commitment period;

108. *Urges* host and purchasing Parties to report transparently on internationally transferred mitigation outcomes, including outcomes used to meet international pledges, and emission units issued under the Kyoto Protocol with a view to promoting environmental integrity and avoiding double counting;

109. *Recognizes* the social, economic and environmental value of voluntary mitigation actions and their co-benefits for adaptation, health and sustainable development;

110. *Resolves* to strengthen, in the period 2016–2020, the existing technical examination process on mitigation as defined in decision 1/CP.19, paragraph 5(a), and decision 1/CP.20, paragraph 19, taking into account the latest scientific knowledge, including by:

(a) Encouraging Parties, Convention bodies and international organizations to engage in this process, including, as appropriate, in cooperation with relevant non-Party stakeholders, to share their experiences and suggestions, including from regional events, and to cooperate in facilitating the implementation of policies, practices and actions identified during this process in accordance with national sustainable development priorities;

(b) Striving to improve, in consultation with Parties, access to and participation in this process by developing country Party and non-Party experts;

(c) Requesting the Technology Executive Committee and the Climate Technology Centre and Network in accordance with their respective mandates:

(i) To engage in the technical expert meetings and enhance their efforts to facilitate and support Parties in scaling up the implementation of policies, practices and actions identified during this process;

(ii) To provide regular updates during the technical expert meetings on the progress made in facilitating the implementation of policies, practices and actions previously identified during this process;

(iii) To include information on their activities under this process in their joint annual report to the Conference of the Parties;

(d) Encouraging Parties to make effective use of the Climate Technology Centre and Network to obtain assistance to develop economically, environmentally and socially viable project proposals in the high mitigation potential areas identified in this process;

111. *Encourages* the operating entities of the Financial Mechanism of the Convention to engage in the technical expert meetings and to inform participants of their contribution to facilitating progress in the implementation of policies, practices and actions identified during the technical examination process;

112. *Requests* the secretariat to organize the process referred to in paragraph 110 above and disseminate its results, including by:

(a) Organizing, in consultation with the Technology Executive Committee and relevant expert organizations, regular technical expert meetings focusing on specific policies, practices and actions representing best practices and with the potential to be scalable and replicable;

(b) Updating, on an annual basis, following the meetings referred to in paragraph 112(a) above and in time to serve as input to the summary for policymakers referred to in paragraph 112(c) below, a technical paper on the mitigation benefits and co-benefits of policies, practices and actions for enhancing mitigation ambition, as well as on options for supporting their implementation, information on which should be made available in a user-friendly online format;

(c) Preparing, in consultation with the champions referred to in paragraph 122 below, a summary for policymakers, with information on specific policies, practices and actions representing best practices and with the potential to be scalable and replicable, and on options to support their implementation, as well as on relevant collaborative initiatives, and publishing the summary at least two months in advance of each session of the Conference of the Parties as input for the high-level event referred to in paragraph 121 below;

113. *Decides* that the process referred to in paragraph 110 above should be organized jointly by the Subsidiary Body for Implementation and the Subsidiary Body for Scientific and Technological Advice and should take place on an ongoing basis until 2020;

114. *Also decides* to conduct in 2017 an assessment of the process referred to in paragraph 110 above so as to improve its effectiveness;

115. *Resolves* to enhance the provision of urgent and adequate finance, technology and capacity-building support by developed country Parties in order to enhance the level of ambition of pre-2020 action by Parties, and in this regard *strongly urges* developed country Parties to scale up their level of financial support, with a concrete roadmap to achieve the

goal of jointly providing USD 100 billion annually by 2020 for mitigation and adaptation while significantly increasing adaptation finance from current levels and to further provide appropriate technology and capacity-building support;

116. *Decides* to conduct a facilitative dialogue in conjunction with the twenty-second session of the Conference of the Parties to assess the progress in implementing decision 1/CP.19, paragraphs 3 and 4, and identify relevant opportunities to enhance the provision of financial resources, including for technology development and transfer and capacity-building support, with a view to identifying ways to enhance the ambition of mitigation efforts by all Parties, including identifying relevant opportunities to enhance the provision and mobilization of support and enabling environments;

117. *Acknowledges* with appreciation the results of the Lima-Paris Action Agenda, which build on the climate summit convened on 23 September 2014 by the Secretary-General of the United Nations;

118. *Welcomes* the efforts of non-Party stakeholders to scale up their climate actions, and *encourages* the registration of those actions in the Non-State Actor Zone for Climate Action platform;³

119. *Encourages* Parties to work closely with non-Party stakeholders to catalyse efforts to strengthen mitigation and adaptation action;

120. *Also encourages* non-Party stakeholders to increase their engagement in the processes referred to in paragraph 110 above and paragraph 125 below;

121. *Agrees* to convene, pursuant to decision 1/CP.20, paragraph 21, building on the Lima-Paris Action Agenda and in conjunction with each session of the Conference of the Parties during the period 2016–2020, a high-level event that:

(a) Further strengthens high-level engagement on the implementation of policy options and actions arising from the processes referred to in paragraph 110 above and paragraph 125 below, drawing on the summary for policymakers referred to in paragraph 112(c) above;

(b) Provides an opportunity for announcing new or strengthened voluntary efforts, initiatives and coalitions, including the implementation of policies, practices and actions arising from the processes referred to in paragraph 110 above and paragraph 125 below and presented in the summary for policymakers referred to in paragraph 112(c) above;

(c) Takes stock of related progress and recognizes new or strengthened voluntary efforts, initiatives and coalitions;

(d) Provides meaningful and regular opportunities for the effective high-level engagement of dignitaries of Parties, international organizations, international cooperative initiatives and non-Party stakeholders;

122. *Decides* that two high-level champions shall be appointed to act on behalf of the President of the Conference of the Parties to facilitate through strengthened high-level engagement in the period 2016–2020 the successful execution of existing efforts and the scaling-up and introduction of new or strengthened voluntary efforts, initiatives and coalitions, including by:

³ <<http://climateaction.unfccc.int/>>.

(a) Working with the Executive Secretary and the current and incoming Presidents of the Conference of the Parties to coordinate the annual high-level event referred to in paragraph 121 above;

(b) Engaging with interested Parties and non-Party stakeholders, including to further the voluntary initiatives of the Lima-Paris Action Agenda;

(c) Providing guidance to the secretariat on the organization of technical expert meetings referred to in paragraph 112(a) above and paragraph 130(a) below;

123. *Also decides* that the high-level champions referred to in paragraph 122 above should normally serve for a term of two years, with their terms overlapping for a full year to ensure continuity, such that:

(a) The President of the Conference of the Parties of the twenty-first session should appoint one champion, who should serve for one year from the date of the appointment until the last day of the Conference of the Parties at its twenty-second session;

(b) The President of the Conference of the Parties of the twenty-second session should appoint one champion who should serve for two years from the date of the appointment until the last day of the Conference of the Parties at its twenty-third session (November 2017);

(c) Thereafter, each subsequent President of the Conference of the Parties should appoint one champion who should serve for two years and succeed the previously appointed champion whose term has ended;

124. *Invites* all interested Parties and relevant organizations to provide support for the work of the champions referred to in paragraph 122 above;

125. *Decides* to launch, in the period 2016–2020, a technical examination process on adaptation;

126. *Also decides* that the technical examination process on adaptation referred to in paragraph 125 above will endeavour to identify concrete opportunities for strengthening resilience, reducing vulnerabilities and increasing the understanding and implementation of adaptation actions;

127. *Further decides* that the technical examination process referred to in paragraph 125 above should be organized jointly by the Subsidiary Body for Implementation and the Subsidiary Body for Scientific and Technological Advice, and conducted by the Adaptation Committee;

128. *Decides* that the process referred to in paragraph 125 above will be pursued by:

(a) Facilitating the sharing of good practices, experiences and lessons learned;

(b) Identifying actions that could significantly enhance the implementation of adaptation actions, including actions that could enhance economic diversification and have mitigation co-benefits;

(c) Promoting cooperative action on adaptation;

(d) Identifying opportunities to strengthen enabling environments and enhance the provision of support for adaptation in the context of specific policies, practices and actions;

129. *Also decides* that the technical examination process on adaptation referred to in paragraph 125 above will take into account the process, modalities, outputs, outcomes and lessons learned from the technical examination process on mitigation referred to in paragraph 110 above;

130. *Requests* the secretariat to support the technical examination process referred to in paragraph 125 above by:

(a) Organizing regular technical expert meetings focusing on specific policies, strategies and actions;

(b) Preparing annually, on the basis of the meetings referred to in paragraph 130(a) above and in time to serve as an input to the summary for policymakers referred to in paragraph 112(c) above, a technical paper on opportunities to enhance adaptation action, as well as options to support their implementation, information on which should be made available in a user-friendly online format;

131. *Decides* that in conducting the process referred to in paragraph 125 above, the Adaptation Committee will engage with and explore ways to take into account, synergize with and build on the existing arrangements for adaptation-related work programmes, bodies and institutions under the Convention so as to ensure coherence and maximum value;

132. *Also decides* to conduct, in conjunction with the assessment referred to in paragraph 120 above, an assessment of the process referred to in paragraph 125 above, so as to improve its effectiveness;

133. *Invites* Parties and observer organizations to submit information on the opportunities referred to in paragraph 126 above by 3 February 2016;

V. NON-PARTY STAKEHOLDERS

134. *Welcomes* the efforts of all non-Party stakeholders to address and respond to climate change, including those of civil society, the private sector, financial institutions, cities and other subnational authorities;

135. *Invites* the non-Party stakeholders referred to in paragraph 134 above to scale up their efforts and support actions to reduce emissions and/or to build resilience and decrease vulnerability to the adverse effects of climate change and demonstrate these efforts via the Non-State Actor Zone for Climate Action platform⁴ referred to in paragraph 118 above;

136. *Recognizes* the need to strengthen knowledge, technologies, practices and efforts of local communities and indigenous peoples related to addressing and responding to climate change, and *establishes* a platform for the exchange of experiences and sharing of best practices on mitigation and adaptation in a holistic and integrated manner;

137. *Also recognizes* the important role of providing incentives for emission reduction activities, including tools such as domestic policies and carbon pricing;

VI. ADMINISTRATIVE AND BUDGETARY MATTERS

138. *Takes note* of the estimated budgetary implications of the activities to be undertaken by the secretariat referred to in this decision and requests that the actions of the secretariat called for in this decision be undertaken subject to the availability of financial resources;

139. *Emphasizes* the urgency of making additional resources available for the implementation of the relevant actions, including actions referred to in this decision, and the implementation of the work programme referred to in paragraph 9 above;

⁴ <<http://climateaction.unfccc.int/>>.

140. *Urges* Parties to make voluntary contributions for the timely implementation of this decision.

Annex

PARIS AGREEMENT

The Parties to this Agreement,

Being Parties to the United Nations Framework Convention on Climate Change, hereinafter referred to as “the Convention”,

Pursuant to the Durban Platform for Enhanced Action established by decision 1/CP.17 of the Conference of the Parties to the Convention at its seventeenth session,

In pursuit of the objective of the Convention, and being guided by its principles, including the principle of equity and common but differentiated responsibilities and respective capabilities, in the light of different national circumstances,

Recognizing the need for an effective and progressive response to the urgent threat of climate change on the basis of the best available scientific knowledge,

Also recognizing the specific needs and special circumstances of developing country Parties, especially those that are particularly vulnerable to the adverse effects of climate change, as provided for in the Convention,

Taking full account of the specific needs and special situations of the least developed countries with regard to funding and transfer of technology,

Recognizing that Parties may be affected not only by climate change, but also by the impacts of the measures taken in response to it,

Emphasizing the intrinsic relationship that climate change actions, responses and impacts have with equitable access to sustainable development and eradication of poverty,

Recognizing the fundamental priority of safeguarding food security and ending hunger, and the particular vulnerabilities of food production systems to the adverse impacts of climate change,

Taking into account the imperatives of a just transition of the workforce and the creation of decent work and quality jobs in accordance with nationally defined development priorities,

Acknowledging that climate change is a common concern of humankind, Parties should, when taking action to address climate change, respect, promote and consider their respective obligations on human rights, the right to health, the rights of indigenous peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations and the right to development, as well as gender equality, empowerment of women and intergenerational equity,

Recognizing the importance of the conservation and enhancement, as appropriate, of sinks and reservoirs of the greenhouse gases referred to in the Convention,

Noting the importance of ensuring the integrity of all ecosystems, including oceans, and the protection of biodiversity, recognized by some cultures as Mother Earth, and noting the importance for some of the concept of “climate justice”, when taking action to address climate change,

Affirming the importance of education, training, public awareness, public participation, public access to information and cooperation at all levels on the matters addressed in this Agreement,

Recognizing the importance of the engagements of all levels of government and various actors, in accordance with respective national legislations of Parties, in addressing climate change,

Also recognizing that sustainable lifestyles and sustainable patterns of consumption and production, with developed country Parties taking the lead, play an important role in addressing climate change,

Have agreed as follows:

Article 1

For the purpose of this Agreement, the definitions contained in Article 1 of the Convention shall apply. In addition:

1. “Convention” means the United Nations Framework Convention on Climate Change, adopted in New York on 9 May 1992.
2. “Conference of the Parties” means the Conference of the Parties to the Convention.
3. “Party” means a Party to this Agreement.

Article 2

1. This Agreement, in enhancing the implementation of the Convention, including its objective, aims to strengthen the global response to the threat of climate change, in the context of sustainable development and efforts to eradicate poverty, including by:
 - (a) Holding the increase in the global average temperature to well below 2 °C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5 °C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change;
 - (b) Increasing the ability to adapt to the adverse impacts of climate change and foster climate resilience and low greenhouse gas emissions development, in a manner that does not threaten food production;
 - (c) Making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development.
2. This Agreement will be implemented to reflect equity and the principle of common but differentiated responsibilities and respective capabilities, in the light of different national circumstances.

Article 3

As nationally determined contributions to the global response to climate change, all Parties are to undertake and communicate ambitious efforts as defined in Articles 4, 7, 9, 10, 11 and 13 with the view to achieving the purpose of this Agreement as set out in Article 2. The efforts of all Parties will represent a progression over time, while recognizing the need to support developing country Parties for the effective implementation of this Agreement.

Article 4

1. In order to achieve the long-term temperature goal set out in Article 2, Parties aim to reach global peaking of greenhouse gas emissions as soon as possible, recognizing that peaking will take longer for developing country Parties, and to undertake rapid reductions thereafter in accordance with best available science, so as to achieve a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases in the second half of this century, on the basis of equity, and in the context of sustainable development and efforts to eradicate poverty.
2. Each Party shall prepare, communicate and maintain successive nationally determined contributions that it intends to achieve. Parties shall pursue domestic mitigation measures, with the aim of achieving the objectives of such contributions.
3. Each Party’s successive nationally determined contribution will represent a progression beyond the Party’s then current nationally determined contribution and reflect its highest possible ambition, reflecting its common but differentiated responsibilities and respective capabilities, in the light of different national circumstances.
4. Developed country Parties should continue taking the lead by undertaking economy-wide absolute emission reduction targets. Developing country Parties should continue enhancing their mitigation efforts, and are encouraged to move over time towards economy-wide emission reduction or limitation targets in the light of different national circumstances.
5. Support shall be provided to developing country Parties for the implementation of this Article, in accordance with Articles 9, 10 and 11, recognizing that enhanced support for developing country Parties will allow for higher ambition in their actions.

6. The least developed countries and small island developing States may prepare and communicate strategies, plans and actions for low greenhouse gas emissions development reflecting their special circumstances.
7. Mitigation co-benefits resulting from Parties' adaptation actions and/or economic diversification plans can contribute to mitigation outcomes under this Article.
8. In communicating their nationally determined contributions, all Parties shall provide the information necessary for clarity, transparency and understanding in accordance with decision 1/CP.21 and any relevant decisions of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement.
9. Each Party shall communicate a nationally determined contribution every five years in accordance with decision 1/CP.21 and any relevant decisions of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement and be informed by the outcomes of the global stocktake referred to in Article 14.
10. The Conference of the Parties serving as the meeting of the Parties to the Paris Agreement shall consider common time frames for nationally determined contributions at its first session.
11. A Party may at any time adjust its existing nationally determined contribution with a view to enhancing its level of ambition, in accordance with guidance adopted by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement.
12. Nationally determined contributions communicated by Parties shall be recorded in a public registry maintained by the secretariat.
13. Parties shall account for their nationally determined contributions. In accounting for anthropogenic emissions and removals corresponding to their nationally determined contributions, Parties shall promote environmental integrity, transparency, accuracy, completeness, comparability and consistency, and ensure the avoidance of double counting, in accordance with guidance adopted by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement.
14. In the context of their nationally determined contributions, when recognizing and implementing mitigation actions with respect to anthropogenic emissions and removals, Parties should take into account, as appropriate, existing methods and guidance under the Convention, in the light of the provisions of paragraph 13 of this Article.
15. Parties shall take into consideration in the implementation of this Agreement the concerns of Parties with economies most affected by the impacts of response measures, particularly developing country Parties.
16. Parties, including regional economic integration organizations and their member States, that have reached an agreement to act jointly under paragraph 2 of this Article shall notify the secretariat of the terms of that agreement, including the emission level allocated to each Party within the relevant time period, when they communicate their nationally determined contributions. The secretariat shall in turn inform the Parties and signatories to the Convention of the terms of that agreement.
17. Each party to such an agreement shall be responsible for its emission level as set out in the agreement referred to in paragraph 16 above in accordance with paragraphs 13 and 14 of this Article and Articles 13 and 15.
18. If Parties acting jointly do so in the framework of, and together with, a regional economic integration organization which is itself a Party to this Agreement, each member State of that regional economic integration organization individually, and together with the regional economic integration organization, shall be responsible for its emission level as set out in the agreement communicated under paragraph 16 of this Article in accordance with paragraphs 13 and 14 of this Article and Articles 13 and 15.
19. All Parties should strive to formulate and communicate long-term low greenhouse gas emission development strategies, mindful of Article 2 taking into account their common but differentiated responsibilities and respective capabilities, in the light of different national circumstances.

Article 5

1. Parties should take action to conserve and enhance, as appropriate, sinks and reservoirs of greenhouse gases as referred to in Article 4, paragraph 1(d), of the Convention, including forests.
2. Parties are encouraged to take action to implement and support, including through results-based payments, the existing framework as set out in related guidance and decisions already agreed under the Convention for: policy approaches and positive incentives for activities relating to reducing emissions from deforestation and forest degradation, and the role of conservation, sustainable management of forests and enhancement of forest carbon

stocks in developing countries; and alternative policy approaches, such as joint mitigation and adaptation approaches for the integral and sustainable management of forests, while reaffirming the importance of incentivizing, as appropriate, non-carbon benefits associated with such approaches.

Article 6

1. Parties recognize that some Parties choose to pursue voluntary cooperation in the implementation of their nationally determined contributions to allow for higher ambition in their mitigation and adaptation actions and to promote sustainable development and environmental integrity.
2. Parties shall, where engaging on a voluntary basis in cooperative approaches that involve the use of internationally transferred mitigation outcomes towards nationally determined contributions, promote sustainable development and ensure environmental integrity and transparency, including in governance, and shall apply robust accounting to ensure, inter alia, the avoidance of double counting, consistent with guidance adopted by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement.
3. The use of internationally transferred mitigation outcomes to achieve nationally determined contributions under this Agreement shall be voluntary and authorized by participating Parties.
4. A mechanism to contribute to the mitigation of greenhouse gas emissions and support sustainable development is hereby established under the authority and guidance of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement for use by Parties on a voluntary basis. It shall be supervised by a body designated by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement, and shall aim:
 - (a) To promote the mitigation of greenhouse gas emissions while fostering sustainable development;
 - (b) To incentivize and facilitate participation in the mitigation of greenhouse gas emissions by public and private entities authorized by a Party;
 - (c) To contribute to the reduction of emission levels in the host Party, which will benefit from mitigation activities resulting in emission reductions that can also be used by another Party to fulfil its nationally determined contribution; and
 - (d) To deliver an overall mitigation in global emissions.
5. Emission reductions resulting from the mechanism referred to in paragraph 4 of this Article shall not be used to demonstrate achievement of the host Party's nationally determined contribution if used by another Party to demonstrate achievement of its nationally determined contribution.
6. The Conference of the Parties serving as the meeting of the Parties to the Paris Agreement shall ensure that a share of the proceeds from activities under the mechanism referred to in paragraph 4 of this Article is used to cover administrative expenses as well as to assist developing country Parties that are particularly vulnerable to the adverse effects of climate change to meet the costs of adaptation.
7. The Conference of the Parties serving as the meeting of the Parties to the Paris Agreement shall adopt rules, modalities and procedures for the mechanism referred to in paragraph 4 of this Article at its first session.
8. Parties recognize the importance of integrated, holistic and balanced non-market approaches being available to Parties to assist in the implementation of their nationally determined contributions, in the context of sustainable development and poverty eradication, in a coordinated and effective manner, including through, inter alia, mitigation, adaptation, finance, technology transfer and capacity-building, as appropriate. These approaches shall aim to:
 - (a) Promote mitigation and adaptation ambition;
 - (b) Enhance public and private sector participation in the implementation of nationally determined contributions; and
 - (c) Enable opportunities for coordination across instruments and relevant institutional arrangements.
9. A framework for non-market approaches to sustainable development is hereby defined to promote the non-market approaches referred to in paragraph 8 of this Article.

Article 7

1. Parties hereby establish the global goal on adaptation of enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change, with a view to contributing to sustainable development and ensuring an adequate adaptation response in the context of the temperature goal referred to in Article 2.
2. Parties recognize that adaptation is a global challenge faced by all with local, subnational, national, regional and international dimensions, and that it is a key component of and makes a contribution to the long-term global response to climate change to protect people, livelihoods and ecosystems, taking into account the urgent and immediate needs of those developing country Parties that are particularly vulnerable to the adverse effects of climate change.
3. The adaptation efforts of developing country Parties shall be recognized, in accordance with the modalities to be adopted by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its first session.
4. Parties recognize that the current need for adaptation is significant and that greater levels of mitigation can reduce the need for additional adaptation efforts, and that greater adaptation needs can involve greater adaptation costs.
5. Parties acknowledge that adaptation action should follow a country-driven, gender-responsive, participatory and fully transparent approach, taking into consideration vulnerable groups, communities and ecosystems, and should be based on and guided by the best available science and, as appropriate, traditional knowledge, knowledge of indigenous peoples and local knowledge systems, with a view to integrating adaptation into relevant socioeconomic and environmental policies and actions, where appropriate.
6. Parties recognize the importance of support for and international cooperation on adaptation efforts and the importance of taking into account the needs of developing country Parties, especially those that are particularly vulnerable to the adverse effects of climate change.
7. Parties should strengthen their cooperation on enhancing action on adaptation, taking into account the Cancun Adaptation Framework, including with regard to:
 - (a) Sharing information, good practices, experiences and lessons learned, including, as appropriate, as these relate to science, planning, policies and implementation in relation to adaptation actions;
 - (b) Strengthening institutional arrangements, including those under the Convention that serve this Agreement, to support the synthesis of relevant information and knowledge, and the provision of technical support and guidance to Parties;
 - (c) Strengthening scientific knowledge on climate, including research, systematic observation of the climate system and early warning systems, in a manner that informs climate services and supports decision-making;
 - (d) Assisting developing country Parties in identifying effective adaptation practices, adaptation needs, priorities, support provided and received for adaptation actions and efforts, and challenges and gaps, in a manner consistent with encouraging good practices;
 - (e) Improving the effectiveness and durability of adaptation actions.
8. United Nations specialized organizations and agencies are encouraged to support the efforts of Parties to implement the actions referred to in paragraph 7 of this Article, taking into account the provisions of paragraph 5 of this Article.
9. Each Party shall, as appropriate, engage in adaptation planning processes and the implementation of actions, including the development or enhancement of relevant plans, policies and/or contributions, which may include:
 - (a) The implementation of adaptation actions, undertakings and/or efforts;
 - (b) The process to formulate and implement national adaptation plans;
 - (c) The assessment of climate change impacts and vulnerability, with a view to formulating nationally determined prioritized actions, taking into account vulnerable people, places and ecosystems;
 - (d) Monitoring and evaluating and learning from adaptation plans, policies, programmes and actions; and
 - (e) Building the resilience of socioeconomic and ecological systems, including through economic diversification and sustainable management of natural resources.

10. Each Party should, as appropriate, submit and update periodically an adaptation communication, which may include its priorities, implementation and support needs, plans and actions, without creating any additional burden for developing country Parties.
11. The adaptation communication referred to in paragraph 10 of this Article shall be, as appropriate, submitted and updated periodically, as a component of or in conjunction with other communications or documents, including a national adaptation plan, a nationally determined contribution as referred to in Article 4, paragraph 2, and/or a national communication.
12. The adaptation communications referred to in paragraph 10 of this Article shall be recorded in a public registry maintained by the secretariat.
13. Continuous and enhanced international support shall be provided to developing country Parties for the implementation of paragraphs 7, 9, 10 and 11 of this Article, in accordance with the provisions of Articles 9, 10 and 11.
14. The global stocktake referred to in Article 14 shall, inter alia:
 - (a) Recognize adaptation efforts of developing country Parties;
 - (b) Enhance the implementation of adaptation action taking into account the adaptation communication referred to in paragraph 10 of this Article;
 - (c) Review the adequacy and effectiveness of adaptation and support provided for adaptation; and
 - (d) Review the overall progress made in achieving the global goal on adaptation referred to in paragraph 1 of this Article.

Article 8

1. Parties recognize the importance of averting, minimizing and addressing loss and damage associated with the adverse effects of climate change, including extreme weather events and slow onset events, and the role of sustainable development in reducing the risk of loss and damage.
2. The Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts shall be subject to the authority and guidance of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement and may be enhanced and strengthened, as determined by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement.
3. Parties should enhance understanding, action and support, including through the Warsaw International Mechanism, as appropriate, on a cooperative and facilitative basis with respect to loss and damage associated with the adverse effects of climate change.
4. Accordingly, areas of cooperation and facilitation to enhance understanding, action and support may include:
 - (a) Early warning systems;
 - (b) Emergency preparedness;
 - (c) Slow onset events;
 - (d) Events that may involve irreversible and permanent loss and damage;
 - (e) Comprehensive risk assessment and management;
 - (f) Risk insurance facilities, climate risk pooling and other insurance solutions;
 - (g) Non-economic losses;
 - (h) Resilience of communities, livelihoods and ecosystems.
5. The Warsaw International Mechanism shall collaborate with existing bodies and expert groups under the Agreement, as well as relevant organizations and expert bodies outside the Agreement.

Article 9

1. Developed country Parties shall provide financial resources to assist developing country Parties with respect to both mitigation and adaptation in continuation of their existing obligations under the Convention.
2. Other Parties are encouraged to provide or continue to provide such support voluntarily.
3. As part of a global effort, developed country Parties should continue to take the lead in mobilizing climate finance from a wide variety of sources, instruments and channels, noting the significant role of public funds,

through a variety of actions, including supporting country-driven strategies, and taking into account the needs and priorities of developing country Parties. Such mobilization of climate finance should represent a progression beyond previous efforts.

4. The provision of scaled-up financial resources should aim to achieve a balance between adaptation and mitigation, taking into account country-driven strategies, and the priorities and needs of developing country Parties, especially those that are particularly vulnerable to the adverse effects of climate change and have significant capacity constraints, such as the least developed countries and small island developing States, considering the need for public and grant-based resources for adaptation.
5. Developed country Parties shall biennially communicate indicative quantitative and qualitative information related to paragraphs 1 and 3 of this Article, as applicable, including, as available, projected levels of public financial resources to be provided to developing country Parties. Other Parties providing resources are encouraged to communicate biennially such information on a voluntary basis.
6. The global stocktake referred to in Article 14 shall take into account the relevant information provided by developed country Parties and/or Agreement bodies on efforts related to climate finance.
7. Developed country Parties shall provide transparent and consistent information on support for developing country Parties provided and mobilized through public interventions biennially in accordance with the modalities, procedures and guidelines to be adopted by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement, at its first session, as stipulated in Article 13, paragraph 13. Other Parties are encouraged to do so.
8. The Financial Mechanism of the Convention, including its operating entities, shall serve as the financial mechanism of this Agreement.
9. The institutions serving this Agreement, including the operating entities of the Financial Mechanism of the Convention, shall aim to ensure efficient access to financial resources through simplified approval procedures and enhanced readiness support for developing country Parties, in particular for the least developed countries and small island developing States, in the context of their national climate strategies and plans.

Article 10

1. Parties share a long-term vision on the importance of fully realizing technology development and transfer in order to improve resilience to climate change and to reduce greenhouse gas emissions.
2. Parties, noting the importance of technology for the implementation of mitigation and adaptation actions under this Agreement and recognizing existing technology deployment and dissemination efforts, shall strengthen cooperative action on technology development and transfer.
3. The Technology Mechanism established under the Convention shall serve this Agreement.
4. A technology framework is hereby established to provide overarching guidance to the work of the Technology Mechanism in promoting and facilitating enhanced action on technology development and transfer in order to support the implementation of this Agreement, in pursuit of the long-term vision referred to in paragraph 1 of this Article.
5. Accelerating, encouraging and enabling innovation is critical for an effective, long-term global response to climate change and promoting economic growth and sustainable development. Such effort shall be, as appropriate, supported, including by the Technology Mechanism and, through financial means, by the Financial Mechanism of the Convention, for collaborative approaches to research and development, and facilitating access to technology, in particular for early stages of the technology cycle, to developing country Parties.
6. Support, including financial support, shall be provided to developing country Parties for the implementation of this Article, including for strengthening cooperative action on technology development and transfer at different stages of the technology cycle, with a view to achieving a balance between support for mitigation and adaptation. The global stocktake referred to in Article 14 shall take into account available information on efforts related to support on technology development and transfer for developing country Parties.

Article 11

1. Capacity-building under this Agreement should enhance the capacity and ability of developing country Parties, in particular countries with the least capacity, such as the least developed countries, and those that are particularly vulnerable to the adverse effects of climate change, such as small island developing States, to take

effective climate change action, including, inter alia, to implement adaptation and mitigation actions, and should facilitate technology development, dissemination and deployment, access to climate finance, relevant aspects of education, training and public awareness, and the transparent, timely and accurate communication of information.

2. Capacity-building should be country-driven, based on and responsive to national needs, and foster country ownership of Parties, in particular, for developing country Parties, including at the national, subnational and local levels. Capacity-building should be guided by lessons learned, including those from capacity-building activities under the Convention, and should be an effective, iterative process that is participatory, cross-cutting and gender-responsive.
3. All Parties should cooperate to enhance the capacity of developing country Parties to implement this Agreement. Developed country Parties should enhance support for capacity-building actions in developing country Parties.
4. All Parties enhancing the capacity of developing country Parties to implement this Agreement, including through regional, bilateral and multilateral approaches, shall regularly communicate on these actions or measures on capacity-building. Developing country Parties should regularly communicate progress made on implementing capacity-building plans, policies, actions or measures to implement this Agreement.
5. Capacity-building activities shall be enhanced through appropriate institutional arrangements to support the implementation of this Agreement, including the appropriate institutional arrangements established under the Convention that serve this Agreement. The Conference of the Parties serving as the meeting of the Parties to the Paris Agreement shall, at its first session, consider and adopt a decision on the initial institutional arrangements for capacity-building.

Article 12

Parties shall cooperate in taking measures, as appropriate, to enhance climate change education, training, public awareness, public participation and public access to information, recognizing the importance of these steps with respect to enhancing actions under this Agreement.

Article 13

1. In order to build mutual trust and confidence and to promote effective implementation, an enhanced transparency framework for action and support, with built-in flexibility which takes into account Parties' different capacities and builds upon collective experience is hereby established.
2. The transparency framework shall provide flexibility in the implementation of the provisions of this Article to those developing country Parties that need it in the light of their capacities. The modalities, procedures and guidelines referred to in paragraph 13 of this Article shall reflect such flexibility.
3. The transparency framework shall build on and enhance the transparency arrangements under the Convention, recognizing the special circumstances of the least developed countries and small island developing States, and be implemented in a facilitative, non-intrusive, non-punitive manner, respectful of national sovereignty, and avoid placing undue burden on Parties.
4. The transparency arrangements under the Convention, including national communications, biennial reports and biennial update reports, international assessment and review and international consultation and analysis, shall form part of the experience drawn upon for the development of the modalities, procedures and guidelines under paragraph 13 of this Article.
5. The purpose of the framework for transparency of action is to provide a clear understanding of climate change action in the light of the objective of the Convention as set out in its Article 2, including clarity and tracking of progress towards achieving Parties' individual nationally determined contributions under Article 4, and Parties' adaptation actions under Article 7, including good practices, priorities, needs and gaps, to inform the global stocktake under Article 14.
6. The purpose of the framework for transparency of support is to provide clarity on support provided and received by relevant individual Parties in the context of climate change actions under Articles 4, 7, 9, 10 and 11, and, to the extent possible, to provide a full overview of aggregate financial support provided, to inform the global stocktake under Article 14.
7. Each Party shall regularly provide the following information:

- (a) A national inventory report of anthropogenic emissions by sources and removals by sinks of greenhouse gases, prepared using good practice methodologies accepted by the Intergovernmental Panel on Climate Change and agreed upon by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement;
 - (b) Information necessary to track progress made in implementing and achieving its nationally determined contribution under Article 4.
8. Each Party should also provide information related to climate change impacts and adaptation under Article 7, as appropriate.
 9. Developed country Parties shall, and other Parties that provide support should, provide information on financial, technology transfer and capacity-building support provided to developing country Parties under Article 9, 10 and 11.
 10. Developing country Parties should provide information on financial, technology transfer and capacity-building support needed and received under Articles 9, 10 and 11.
 11. Information submitted by each Party under paragraphs 7 and 9 of this Article shall undergo a technical expert review, in accordance with decision 1/CP.21. For those developing country Parties that need it in the light of their capacities, the review process shall include assistance in identifying capacity-building needs. In addition, each Party shall participate in a facilitative, multilateral consideration of progress with respect to efforts under Article 9, and its respective implementation and achievement of its nationally determined contribution.
 12. The technical expert review under this paragraph shall consist of a consideration of the Party's support provided, as relevant, and its implementation and achievement of its nationally determined contribution. The review shall also identify areas of improvement for the Party, and include a review of the consistency of the information with the modalities, procedures and guidelines referred to in paragraph 13 of this Article, taking into account the flexibility accorded to the Party under paragraph 2 of this Article. The review shall pay particular attention to the respective national capabilities and circumstances of developing country Parties.
 13. The Conference of the Parties serving as the meeting of the Parties to the Paris Agreement shall, at its first session, building on experience from the arrangements related to transparency under the Convention, and elaborating on the provisions in this Article, adopt common modalities, procedures and guidelines, as appropriate, for the transparency of action and support.
 14. Support shall be provided to developing countries for the implementation of this Article.
 15. Support shall also be provided for the building of transparency-related capacity of developing country Parties on a continuous basis.

Article 14

1. The Conference of the Parties serving as the meeting of the Parties to the Paris Agreement shall periodically take stock of the implementation of this Agreement to assess the collective progress towards achieving the purpose of this Agreement and its long-term goals (referred to as the "global stocktake"). It shall do so in a comprehensive and facilitative manner, considering mitigation, adaptation and the means of implementation and support, and in the light of equity and the best available science.
2. The Conference of the Parties serving as the meeting of the Parties to the Paris Agreement shall undertake its first global stocktake in 2023 and every five years thereafter unless otherwise decided by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement.
3. The outcome of the global stocktake shall inform Parties in updating and enhancing, in a nationally determined manner, their actions and support in accordance with the relevant provisions of this Agreement, as well as in enhancing international cooperation for climate action.

Article 15

1. A mechanism to facilitate implementation of and promote compliance with the provisions of this Agreement is hereby established.
2. The mechanism referred to in paragraph 1 of this Article shall consist of a committee that shall be expert-based and facilitative in nature and function in a manner that is transparent, non-adversarial and non-punitive. The committee shall pay particular attention to the respective national capabilities and circumstances of Parties.

3. The committee shall operate under the modalities and procedures adopted by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its first session and report annually to the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement.

Article 16

1. The Conference of the Parties, the supreme body of the Convention, shall serve as the meeting of the Parties to this Agreement.
2. Parties to the Convention that are not Parties to this Agreement may participate as observers in the proceedings of any session of the Conference of the Parties serving as the meeting of the Parties to this Agreement. When the Conference of the Parties serves as the meeting of the Parties to this Agreement, decisions under this Agreement shall be taken only by those that are Parties to this Agreement.
3. When the Conference of the Parties serves as the meeting of the Parties to this Agreement, any member of the Bureau of the Conference of the Parties representing a Party to the Convention but, at that time, not a Party to this Agreement, shall be replaced by an additional member to be elected by and from amongst the Parties to this Agreement.
4. The Conference of the Parties serving as the meeting of the Parties to the Paris Agreement shall keep under regular review the implementation of this Agreement and shall make, within its mandate, the decisions necessary to promote its effective implementation. It shall perform the functions assigned to it by this Agreement and shall:
 - (a) Establish such subsidiary bodies as deemed necessary for the implementation of this Agreement; and
 - (b) Exercise such other functions as may be required for the implementation of this Agreement.
5. The rules of procedure of the Conference of the Parties and the financial procedures applied under the Convention shall be applied *mutatis mutandis* under this Agreement, except as may be otherwise decided by consensus by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement.
6. The first session of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement shall be convened by the secretariat in conjunction with the first session of the Conference of the Parties that is scheduled after the date of entry into force of this Agreement. Subsequent ordinary sessions of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement shall be held in conjunction with ordinary sessions of the Conference of the Parties, unless otherwise decided by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement.
7. Extraordinary sessions of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement shall be held at such other times as may be deemed necessary by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement or at the written request of any Party, provided that, within six months of the request being communicated to the Parties by the secretariat, it is supported by at least one third of the Parties.
8. The United Nations and its specialized agencies and the International Atomic Energy Agency, as well as any State member thereof or observers thereto not party to the Convention, may be represented at sessions of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement as observers. Any body or agency, whether national or international, governmental or non-governmental, which is qualified in matters covered by this Agreement and which has informed the secretariat of its wish to be represented at a session of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement as an observer, may be so admitted unless at least one third of the Parties present object. The admission and participation of observers shall be subject to the rules of procedure referred to in paragraph 5 of this Article.

Article 17

1. The secretariat established by Article 8 of the Convention shall serve as the secretariat of this Agreement.
2. Article 8, paragraph 2, of the Convention on the functions of the secretariat, and Article 8, paragraph 3, of the Convention, on the arrangements made for the functioning of the secretariat, shall apply *mutatis mutandis* to this Agreement. The secretariat shall, in addition, exercise the functions assigned to it under this Agreement and by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement.

Article 18

1. The Subsidiary Body for Scientific and Technological Advice and the Subsidiary Body for Implementation established by Articles 9 and 10 of the Convention shall serve, respectively, as the Subsidiary Body for Scientific and Technological Advice and the Subsidiary Body for Implementation of this Agreement. The provisions of the Convention relating to the functioning of these two bodies shall apply mutatis mutandis to this Agreement. Sessions of the meetings of the Subsidiary Body for Scientific and Technological Advice and the Subsidiary Body for Implementation of this Agreement shall be held in conjunction with the meetings of, respectively, the Subsidiary Body for Scientific and Technological Advice and the Subsidiary Body for Implementation of the Convention.
2. Parties to the Convention that are not Parties to this Agreement may participate as observers in the proceedings of any session of the subsidiary bodies. When the subsidiary bodies serve as the subsidiary bodies of this Agreement, decisions under this Agreement shall be taken only by those that are Parties to this Agreement.
3. When the subsidiary bodies established by Articles 9 and 10 of the Convention exercise their functions with regard to matters concerning this Agreement, any member of the bureaux of those subsidiary bodies representing a Party to the Convention but, at that time, not a Party to this Agreement, shall be replaced by an additional member to be elected by and from amongst the Parties to this Agreement.

Article 19

1. Subsidiary bodies or other institutional arrangements established by or under the Convention, other than those referred to in this Agreement, shall serve this Agreement upon a decision of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement. The Conference of the Parties serving as the meeting of the Parties to the Paris Agreement shall specify the functions to be exercised by such subsidiary bodies or arrangements.
2. The Conference of the Parties serving as the meeting of the Parties to the Paris Agreement may provide further guidance to such subsidiary bodies and institutional arrangements.

Article 20

1. This Agreement shall be open for signature and subject to ratification, acceptance or approval by States and regional economic integration organizations that are Parties to the Convention. It shall be open for signature at the United Nations Headquarters in New York from 22 April 2016 to 21 April 2017. Thereafter, this Agreement shall be open for accession from the day following the date on which it is closed for signature. Instruments of ratification, acceptance, approval or accession shall be deposited with the Depositary.
2. Any regional economic integration organization that becomes a Party to this Agreement without any of its member States being a Party shall be bound by all the obligations under this Agreement. In the case of regional economic integration organizations with one or more member States that are Parties to this Agreement, the organization and its member States shall decide on their respective responsibilities for the performance of their obligations under this Agreement. In such cases, the organization and the member States shall not be entitled to exercise rights under this Agreement concurrently.
3. In their instruments of ratification, acceptance, approval or accession, regional economic integration organizations shall declare the extent of their competence with respect to the matters governed by this Agreement. These organizations shall also inform the Depositary, who shall in turn inform the Parties, of any substantial modification in the extent of their competence.

Article 21

1. This Agreement shall enter into force on the thirtieth day after the date on which at least 55 Parties to the Convention accounting in total for at least an estimated 55 percent of the total global greenhouse gas emissions have deposited their instruments of ratification, acceptance, approval or accession.
2. Solely for the limited purpose of paragraph 1 of this Article, “total global greenhouse gas emissions” means the most up-to-date amount communicated on or before the date of adoption of this Agreement by the Parties to the Convention.
3. For each State or regional economic integration organization that ratifies, accepts or approves this Agreement or accedes thereto after the conditions set out in paragraph 1 of this Article for entry into force have been fulfilled,

this Agreement shall enter into force on the thirtieth day after the date of deposit by such State or regional economic integration organization of its instrument of ratification, acceptance, approval or accession.

4. For the purposes of paragraph 1 of this Article, any instrument deposited by a regional economic integration organization shall not be counted as additional to those deposited by its member States.

Article 22

The provisions of Article 15 of the Convention on the adoption of amendments to the Convention shall apply mutatis mutandis to this Agreement.

Article 23

1. The provisions of Article 16 of the Convention on the adoption and amendment of annexes to the Convention shall apply mutatis mutandis to this Agreement.
2. Annexes to this Agreement shall form an integral part thereof and, unless otherwise expressly provided for, a reference to this Agreement constitutes at the same time a reference to any annexes thereto. Such annexes shall be restricted to lists, forms and any other material of a descriptive nature that is of a scientific, technical, procedural or administrative character.

Article 24

The provisions of Article 14 of the Convention on settlement of disputes shall apply mutatis mutandis to this Agreement.

Article 25

1. Each Party shall have one vote, except as provided for paragraph 2 of this Article.
2. Regional economic integration organizations, in matters within their competence, shall exercise their right to vote with a number of votes equal to the number of their member States that are Parties to this Agreement. Such an organization shall not exercise its right to vote if any of its member States exercises its right, and vice versa.

Article 26

The Secretary-General of the United Nations shall be the Depositary of this Agreement.

Article 27

No reservations may be made to this Agreement.

Article 28

1. At any time after three years from the date on which this Agreement has entered into force for a Party, that Party may withdraw from this Agreement by giving written notification to the Depositary.
2. Any such withdrawal shall take effect upon expiry of one year from the date of receipt by the Depositary of the notification of withdrawal, or on such later date as may be specified in the notification of withdrawal.
3. Any Party that withdraws from the Convention shall be considered as also having withdrawn from this Agreement.

Article 29

The original of this Agreement, of which the Arabic, Chinese, English, French, Russian and Spanish texts are equally authentic, shall be deposited with the Secretary-General of the United Nations.

DONE at Paris this twelfth day of December two thousand and fifteen.

IN WITNESS WHEREOF, the undersigned, being duly authorized to that effect, have signed this Agreement.
